



**Universität
Zürich^{UZH}**

Parenting styles in gay families

Thesis (cumulative thesis)

presented to the Faculty of Arts and Social Sciences

of the University of Zurich

for the degree of Doctor of Philosophy

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Accepted in the fall semester 2020

on the recommendation of the doctoral committee composed of

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Zurich, 2020

Abstract

There is less research on parenting styles in Europe currently than, for example, in the 1970s, when many researchers were working on the subject, developing instruments, and designing models for parenting styles. Parenting styles are influenced by many factors, such as the temperament of the child, the personality of the parents, or the cooperation between parents. Since the 1970s, ever more homosexual parents in Western cultures are open to their sexual orientation, live it, and use the opportunity to raise children, whether through surrogacy, adoption, or living with a second homosexual couple of another gender. Thus, in recent decades, in addition to a number of forms that replace the traditional family (e.g. patchwork families), ‘new’ or ‘modern’ family forms have correspondingly been discussed in literature (e.g. rainbow families, queer families). Most research in this area has focused on the immediate development of children in these family forms, such as the perennial question of whether children whose parents are homosexual more likely to display this sexual orientation in adulthood. In this work, the focus was on the parents. In this thesis project, we investigated the extent to which the parents’ parenting style is related to or independent of their sexual orientation. From this starting point, two studies were derived that investigated the parenting styles and related factors of homosexual and heterosexual couples. Study 1 showed correlations between parenting style, sexual orientation, and the temperament of the firstborn child. The homosexual parents reported a warmer parenting style, more cooperation, and less irritation with the temperament of the firstborn child. Study 2 investigated personality and the cooperation between the two parents. Here, both family forms showed many similarities, but they still differed slightly in personality and cooperation. In summary, the results of this doctoral thesis show that there are slight differences in parenting styles between homosexual and heterosexual parents and that these differences are partly significant but should also be considered with caution due to the parents' self-assessment.

Zusammenfassung

In Europa gibt es derzeit weniger Forschung über elterliche Erziehungsstile als beispielsweise in den 1970er Jahren, als viele Forscher an diesem Thema arbeiteten, Instrumente entwickelten und Modelle für Erziehungsstile entwarfen. Erziehungsstile werden von vielen Faktoren beeinflusst, wie z.B. dem Temperament des Kindes, der Persönlichkeit der Eltern oder der Zusammenarbeit zwischen den Eltern. Ebenfalls seit den 1970er Jahren stehen immer mehr homosexuelle Eltern in vorwiegend westlichen Kulturen offen zu ihrer sexuellen Orientierung, leben sie und nutzen zunehmend auch die Möglichkeiten, Kinder aufzuziehen, sei es durch Leihmutterschaft, Adoption oder das Zusammenleben mit einem zweiten homosexuellen Paar eines anderen Geschlechts. So werden in den letzten Jahrzehnten neben einer Reihe von Formen, welche die traditionelle Familie ersetzen (z.B. Patchwork-Familien), in der Literatur entsprechend "neue" oder "moderne" Familienformen diskutiert (z.B. Regenbogenfamilien, queere Familien). Die meiste Forschung in diesem Bereich hat sich auf die unmittelbare Entwicklung von Kindern in diesen Familienformen konzentriert, wie z.B. die immer wiederkehrende Frage, ob Kinder, deren Eltern homosexuell sind, im Erwachsenenalter eher diese sexuelle Orientierung zeigen. In dieser Arbeit lag der Schwerpunkt auf den Eltern. In diesem Dissertationsprojekt wurde untersucht, inwieweit der Erziehungsstil der Eltern mit ihrer sexuellen Orientierung zusammenhängt oder davon unabhängig ist. Von diesem Ausgangspunkt aus wurden zwei Studien abgeleitet, die die Erziehungsstile und die damit verbundenen Faktoren von homosexuellen und heterosexuellen Paaren untersuchten. Studie 1 zeigte Korrelationen zwischen dem Elternstil, der sexuellen Orientierung und dem Temperament des erstgeborenen Kindes. Die homosexuellen Eltern berichteten über einen wärmeren Elternstil, mehr Kooperation und weniger Irritation mit dem Temperament des erstgeborenen Kindes. Studie 2 untersuchte die Persönlichkeit und die Zusammenarbeit zwischen den beiden Elternteilen. Hier zeigten beide Familienformen viele

Ähnlichkeiten, aber sie unterscheiden sich dennoch leicht in der Persönlichkeit und der Kooperation. Zusammenfassend zeigen die Ergebnisse dieser Doktorarbeit, dass es leichte Unterschiede in den Erziehungsstilen zwischen homosexuellen und heterosexuellen Eltern gibt und dass diese Unterschiede zum Teil signifikant sind, aber aufgrund der Selbsteinschätzung der Eltern auch mit Vorsicht zu betrachten sind.

Danksagung

Mein grösster Dank gilt Prof. Dr. Moritz Daum, welcher mir die Durchführung dieser Arbeit ermöglicht hat und mich in meiner wissenschaftlichen Arbeit stets sehr ermutigt und in hohem Masse gefördert hat.

Ebenso danken möchte ich Frau Prof. Dr. Ulrike Ehlert, welche mit ihren wertvollen Beiträgen zum Gelingen dieser Arbeit beigetragen hat.

Meine Mitarbeiterinnen und Mitarbeitern, sowie meinen Vorgesetzten der Pädagogischen Hochschule Zürich danke ich für ihre Geduld und das Interesse an dieser Arbeit. Ein grosser Dank geht an Dr. Benno Rottermann, welcher mich in statistischen Belangen unterstützt hat.

Ein grosses Dankeschön an alle Familien, welche an meinen Studien teilgenommen haben. Ein spezieller Dank geht an Micha Bollag und Ronald Gasser.

Meiner Familie, meinem Mann und meinen drei Söhnen, welche mich in der Zeit der Dissertation bedingungslos unterstützt haben, gilt ein ganz besonderer Dank.

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Part I

1 Introduction

"Mom, what do you wish for most of all?" "Two very good and lovely girls," says Mama. Madita's eyes become completely blank and her voice trembles a little. "And where are Lisabet and I supposed to go then?" (Lindgren, 1976).

This short scene from the classic children's book *Madita* by Astrid Lindgren shows that children and parents often have different views of parenting. Parents sometimes have clear ideas about how children should be and orient their parenting according to their ideas and wishes. Children, on the other hand, have a very different opinion of themselves or their parents, which can often lead to misunderstandings in daily life or, as in the example, to feelings of grief.

In our society, the family is a person's primary reference group over a significant number of years. Despite the change in family lifestyles and the resulting pluralisation of lifestyles, children generally spend their childhood and youth in their parent's home. The family is likely to have an especially important influence on the upbringing of a child in the first years of life (Belsky, 1984). The influence of environment and the parental home decrease as children grow up (Tucker-Drob et al., 2013). This means that the first years are the most characteristic of the parenting style, while the further years of a child's development are increasingly subject to other interactions. But even beyond early and middle childhood, many young people spend not only their youth, but increasingly their 'young adulthood' up to 25 years and beyond in their parent's home. This new phase of adolescence is referred to in the literature as emerging adulthood (Arnett, 2007). For these reasons, family conditions and influencing factors, such as parenting, have a decisive influence on the socialisation of a child.

In this thesis project, I aimed to explore the parenting styles in homosexual and heterosexual families in Europe. I was particularly interested in whether, and if so how,

parenting differed in these family forms. Furthermore, I aimed to investigate other factors influencing parenting, such as the temperament of the child, the personality of the parents, and cooperation among the partners. In the following sections, I first discuss formative models of parenting styles, then detail the individual factors of parenting styles, and then highlight the main theme of this work, the sexual orientation of parents, against the background of formulated research questions.

1.1 Parenting and its theoretical background

Parenting means the socialisation of the child or the influence of the parents on the child. In the narrower sense, parenting means intentional influence on the personality development of the child and thus presupposes a person who acts intentionally and is thus oriented to a goal. In the broader sense, parenting is based on a concept of behaviour according to which thoughts, attitudes, convictions, wishes, and fears are included in addition to actions (Fuhrer, 2005).

Several models of parenting have been influential. Here, I explain two such theories concerning about parenting and parenting styles. The first model, the process model of the determinants of parenting by Belsky (1984), shows that parenting is determined by multiple factors. It presumes that parenting is directly influenced by the characteristics of the parent, the child, and the family's social context. Among parents' characteristics, the author highlighted the importance of parental personality and parental psychological functioning. Belsky explains that the personality of the parents also arises from their own development. If parents have an attentive, warm-hearted, and responsible personality, then they bring these personality traits with them (Belsky, 1984a, p. 85). Among the child's characteristics, Belsky focused on the temperament of the child. He explains that the temperament of the child has an influence on parenting. For example, if the child cries a lot as a baby, the parents behave

differently towards it. In the social context, he reviewed parents' work habits and sources of parental social support, such as opportunities for exchange with other parents and the marital relationship. The parents' marital relationship influences their personalities as well as their parenting behaviour (Taraban & Shaw, 2018; Belsky, 1984).

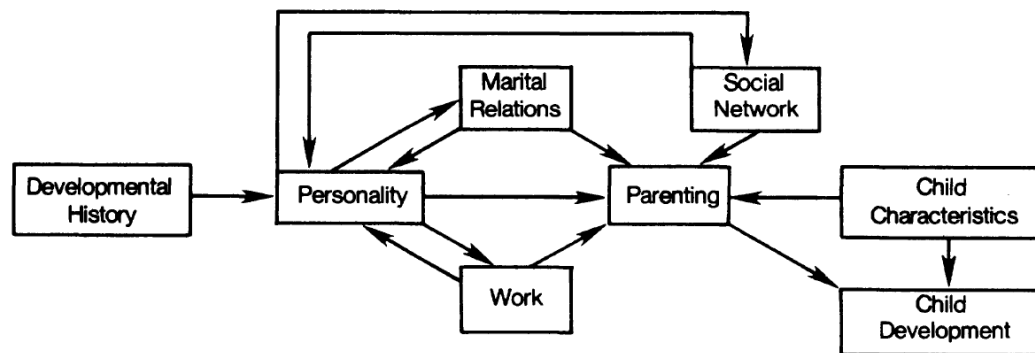


Fig. 1. Process model of the determinants of parenting (Belsky, 1984, p. 84)

Despite its widespread acceptance and frequent reference, empirical support for this model at the time of its publication was minimal, and it was not elaborated or applied (Taraban & Shaw, 2018). Nevertheless, the model remains a cornerstone for research on parenting styles because it attempts to grasp the complexity of parenting.

Similar to Belsky, Darling, Steinberg & Steinberg (2017) see parenting not as something unidirectional but as a multifactorial construct consisting of a number of factors that each influence the others. The authors defined parenting styles as a “constellation of attitudes toward the child that are communicated to the child and that, taken together, create an emotional climate in which the parent’s behaviours are expressed” (Darling, Steinberg & Steinberg, 2017, p. 488). The authors identify three characteristics of parenting styles: the values and goals parents have, their parenting practices, and the attitudes they express toward their children. The authors suggest that these elements fit together as a whole. They focused on processes that occur within the family setting (Darling et al., 1993). According to the

authors, the values and goals of parents are dependent on context. There seem to be differences between the goals and values that parents pursue in a school context and those that are pursued in a musical or sports context. Parenting practices are best understood as operating in fairly circumscribed domains of socialisation, such as academic achievement, independence, and cooperation with peers. Global parenting style is expressed partly through parenting practices, because these are some of the behaviours from which children infer the emotional attitudes of their parents (Darling et al., 1993). In this model, parenting style differs from parenting practices in that parenting style describes parent–child interactions across a wide range of situations, whereas parenting practices are by definition domain specific. The model proposes that both parenting style and parenting practices result in part from the goals and values that parents hold (Figure 2, Arrow 1 and 2). The authors posit that each of these parenting attributes influences the children’s development through different processes. Parenting practices have a direct effort on specific child developmental outcomes (Arrow 3). Parenting styles also influence the children’s openness to parental socialisation (Arrow 5), as this moderates parenting practices (Arrow 4). Children’s openness to parental socialisation influences their adolescent outcomes (Arrow 6).

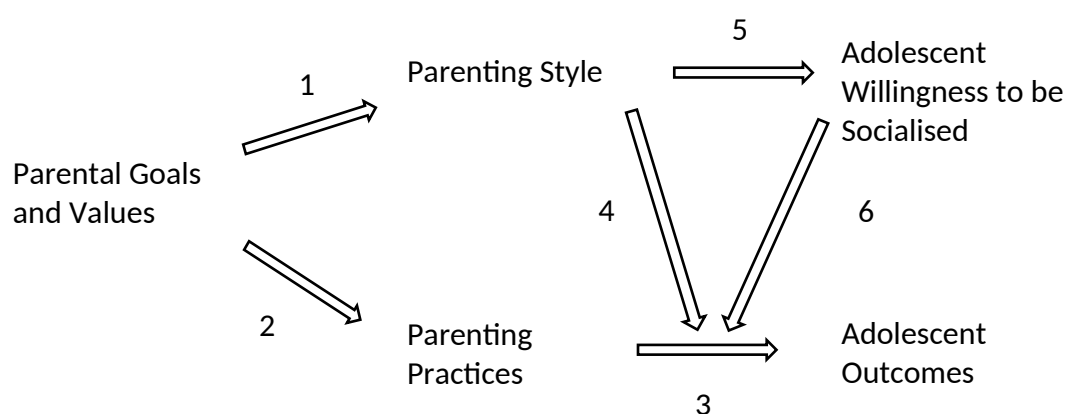


Fig. 2. Integrative Model of parenting (Darling et al., 1993, p. 493)

Darling and Steinberg emphasise that parenting styles and parenting practices are regarded as independent constructs and that future research needs to take this into account.

Both these models thus show that other factors must always be considered when examining parenting styles. It therefore seems that these factors influence each other, but that the nature of this influence remains largely unclear.

In the following sections, I clarify the various factors influencing parenthood. Firstly, I focus on the parenting styles, the measurement of parenting styles and the temperament of the child. Secondly, I examine the cooperation in these family forms and the personality of the parents. I close with the theme of sexual orientation and parenting, the main concern of this work.

1.2 Parenting styles

Parenting style is defined as a class of theoretical constructs which describe the interindividual variable but intraindividual comparatively stable tendencies of parents to react in parenting situations with specific child-related behaviours (Hurrelmann & Lösel, 1990).

Research into parenting styles has a long tradition in developmental psychology. The main reason that scientists switched to this approach in the 1930s and later was the absence of studies examining early caregiving practices to predict individual differences in children's social or emotional development (Power, 2013). Researchers in the last century used different approaches such as, for example, factor analytic methods to identify the possible dimensions underlying the assessments for the observation of general parenting characteristics (Baldwin, 1948). Often, observers, who have completed a previous training, spent time interviewing and observing parents and rated parents on general trait terms (e.g. *strict*, *accepting*) using Likert scales. Factor analyses of the data typically identified two dimensions of parent behaviour: One factor comprised of parental acceptance, support, and warmth, and the other

consisted of constructs related to parental control (Power, 2013). In some early studies, very consistent results were found for the two dimensions regardless of the form of data collection: observer ratings, parent reports, or child reports on parental behaviour (Baldwin, 1948; Sears, Maccoby, & Levin, 1957; Becker, et al., 1962; Rollins & Thomas, 1979). The first factors were labelled in these studies as acceptance versus rejection, emotional warmth versus hostility, and love versus hostility. Labels for the second factor were dominance versus submission, detachment versus involvement, permissiveness versus strictness, and autonomy versus control (Power, 2013). Possible reasons why the studies of the 1930s to the 1960s only identified the two factors mentioned above is probably because these studies focused on the quality of parent-child interactions and the way parents disciplined their children. After the period, in the 1970s, parental researchers began to investigate a wider range of parental characteristics, for example, the factor of cognitive stimulation became a major focus of research (Hess & Shipman, 1965), also monitoring, and family rituals (Fiese, 1992; Power, 2013). The parenting style research established in the 1960s and 1970s treats the parenting style as an explanatory variable for the emergence of individual personality traits in children (Rothbart, 2011). Certainly one of the most frequently cited researchers of the period is Diana Baumrind (Baumrind, 1967; Baumrind, 1971). Baumrind's early work identified three parenting styles. The styles were labelled authoritative, authoritarian, and permissive. Authoritative parents, in her sense, were parents who set firm limits but were warm and responsive to the needs and wishes of their children, and her studies showed they had children who were high in social competence, self-esteem, and social responsibility. Authoritarian parents were described as strict, demanding, and not responsive to their children's needs, and their children were high in antisocial behaviour and anxiety. The third type, permissive parents, made few demands on their children, these children showed low values in self-control and achievement (Grusec & Hastings, 2014). Later, Maccoby and Martin attempted to bridge Baumrind's typology and parenting dimensions (Rutter, 1985). By combining the two

dimensions – demandingness and responsiveness – the authors defined four parenting styles: authoritative, authoritarian, indulgent, and neglectful. Influenced by Maccoby and Martin's (1983) publication, Baumrind extended her typology with a fourth parenting style, neglectful. Neglectful is a parenting style that exhibits little or no support and little or no responsibility. It is considered to be the most unfavourable parenting style (Baumrind, 1991).

Nowadays, there is still consensus among researchers about the existence of at least two broad dimensions of parenting styles, labelled parental support and parental control. The dimensions are mostly obtained by factor analysis and rarely by cluster analysis, and they are often characterised by conceptual contrast pairs and recorded as largely independent of each other. According to Baumrind, parental support refers to the emotional character of the parent-child relationship, which shows itself through commitment, acceptance, emotional availability, warmth, and responsiveness (Baumrind, 1991; Cummings, Davies, & Campbell, 2002). This resembles Maccoby and Martin's responsiveness dimension to some extent. The control dimension has been subdivided into psychological and behavioural control (Steinberg et al., 1990; Cummings, Davies, & Campbell, 2002). Parental behavioural control consists of parenting behaviour that attempts to control, manage, or regulate child behaviour, such as through demands and rules, disciplinary strategies, control of rewards and punishment, and supervisory functions (Steinberg et al., 1990; Kuppens & Ceulemans, 2019). It resembles Maccoby and Martin's demandingness dimension to some extent. Parental psychological control is an intrusive form of control in which parents try to manipulate children's thoughts, emotions, and feelings (Barber & Xia, 2013; Kuppens & Ceulemans, 2019).

Parenting styles are frequently influenced by cultural belief systems, which influence attitudes towards particular parenting practices. In a study by Ateah and Durant (2005), 118 mothers of 3-year-old children were interviewed about their behaviour during corporal punishment. The mothers' attitude towards corporal punishment and their anger towards the children's misbehaviour were considered clear predictors of whether or not the mothers used

corporal punishment. Thus, the mothers' behaviour was influenced by both cognitive factors involving attitudes towards corporal punishment and emotional factors governing the degree of anger (Ateah & Durrant, 2005). The majority of the parenting style research described here was carried out predominantly in Western cultures. Few studies have been implemented in other cultural contexts. Culture is a difficult concept to define, and it is also unclear how much culture has an influence on the parenting styles of parents. As mentioned above, many more factors influence parenting styles than purely cultural factors. In this thesis, I examine the relationship between parenting styles and the sexual orientation of parents.

1.2.1 *Measurement of parenting styles*

At the beginning of research on parenting styles, trained researchers observed parenting behaviour in contrasting settings such as breast versus bottle feeding and physical punishment versus time out (Power, 2013). Nowadays, observer ratings have been complemented with parental reports and children's reports on parenting behaviour. Questionnaires are more often used for the assessment of thoughts, feelings, attitudes, and perceptions of parenting behaviour, whereas parenting behaviour itself is mostly assessed with observational measures (Gardner, 2000). The most common method for assessing parenting is self-report by parents (Kuppens & Ceulemans, 2019; Locke & Prinz, 2002). In this thesis, a self-report technique was used due to its economy of data collection and independence from the experimenter. Here, I briefly discuss two parenting style questionnaires, outline their advantages and disadvantages, and finally justify the choice of the present study.

One recently developed recent questionnaire is the *Eltern-Erziehungsstil-Inventar* (EEI), a German parenting-style inventory (Satow, 2013). The EEI is a 54-item self-report survey for parents that is designed to measure multiple dimensions of parenting such as

warmth (e.g., “I give my child a feeling of warmth and security”), strength (e.g., “It is important that children respect authority figures”), independence (e.g., “I try to help my child to become independent”), religiousness (e.g., “It is important that children are guided by a religious belief system”), parenting cooperation with the partner (e.g., “My partner and I apply the same yardstick in the upbringing of our child”), and parenting cooperation with the pre-school/school (e.g., “We regularly attend meetings with teachers and/or preschool teachers”). The items were scored on a 4-point Likert scale: from 1 = strongly disagree to 4 = strongly agree. A total score is produced and in general, higher scores reflected more positive parenting. Six individual scores are calculated: (a) warmth, (b) strength, (c) independence, and (d) religiousness, with two additional scores calculated: (e) working together with the partner and (f) working together with the pre-school/school. This test was selected for this study because of its topicality and its calibration sample, which was collected in Europe and found to be good. The advantages of the EEI certainly include its topicality and its economy. The questionnaire can be filled in relatively quickly, and the questions are very clear. The instrument had not been translated before this study, so I prepared an English translation. My translation was checked by the author of the original study and found to be good. An online version was also created, also in consultation with the author. The disadvantage of the EEI is the inclusion of a new construct, that of religiousness. Since the test was not developed in the Anglo-American area but in Germany, the factor of religiousness is not addressed by literature outside Europe.

Another instrument, the Alabama Questionnaire (APQ, Essau, Sasagawa, & Frick, 2006) is an American parenting style inventory. The APQ is available in a range of versions: the APQ Child Global Report, APQ Child Telephone Interview, APQ Parent Global Report, and APQ Parent Telephone Interview. There are also number of approved translations of the APQ. Usually, the parent version and the child version are used in parallel (Essau et al., 2006). The APQ Parent Global Report is a 42-item self-report survey for parents, designed to

measure multiple dimensions of parenting such as parental involvement (e.g., “You have a friendly talk with your child”), positive parenting (e.g., “You let your child know when he/she is doing a good job with something”), poor monitoring/supervision (e.g., “Your child stays out in the evening past the time he/she is supposed to be home”), inconsistent discipline (e.g., “You threaten to punish your child and then do not actually punish him/her”), and corporal punishment (e.g., “You spank your child with your hand when he/she has done something wrong”). The items are scored on a 5-point Likert scale: from 1 = never to 5 = always. Items assessing the first two constructs are worded positively, indicating more positive parenting, and items assessing the last three constructs are worded negatively. The APQ is largely used to assess parenting methods. Consequently, it is mainly used in counselling centres and school psychological services. The APQ appeared to be less suitable for this study, especially because the children in this study were significantly younger.

As already mentioned above, most of the parenting style dimensions are explored by factor analysis, which could be a methodical bias. Kuppens and Ceulemans (2019) observe that generally, one factor can be extracted for each variable, so an important question is how many factors should be used. The authors therefore call for research to apply cluster analytical methods more often. However, an earlier meta-analysis of cluster-analytical methods showed that this method is not free of biases either (Power, 2013).

The questionnaires presented here are only two of a variety of valid instruments for measuring parenting style. Priorities for this investigation were the economics of the instrument and a clear theoretical background to the test. In addition, a survey would probably be best combined with observation to measure parenting styles comprehensively. Unfortunately, observation was not feasible in this study, because the additional funds that would have made this possible were not available.

1.3 Temperament of the children

As mentioned in the introduction, parenting is not only influenced by the parent's parenting style; the temperament of the child is another important factor, which will be discussed in the following chapter. Temperament is defined differently by various authors. One of the best-known definitions is certainly that by Rothbart, who defines temperament as constitutionally based individual differences in reactivity and self-regulation (Rothbart, 1986). The term *constitutional* here refers to the biological bases of temperament. In Rothbart's sense, reactivity means how disposed we are to emotional, motor, and attentional reactions (Rothbart, 2011).

The association of temperament with the physiology of the individual and thus with behaviour is not new. Even in ancient times, Greek and Roman physicians regarded the levels of physiological characteristics as determinants of individual differences in behaviour. Although versions of Greek and Roman ideas about adult temperament circulated until the twentieth century, early research into individual differences in children was dominated by social learning and psychoanalytic approaches. The child seemed to be responsible for problems in the parent-child dyad. Until the 1960s, temperamental research on children was somewhat neglected (Bornstein, 2005b). In one of the first studies addressing the temperament of children, Thomas and Chess took a clinical perspective (Thomas, Chess, Birch, Hertzog, & Korn, 1963; Chess, Thomas, Rutter, & Birch, 1963). It was the first contribution to see parents as one of the main cause of problems in children. Thomas and Chess's basic idea was that the child already has a contribution to make to parenting, so the parenting of children is actually bidirectional (Bornstein, 2005b). In particular, the concept of *goodness-of-fit* between the child's characteristics and the requirements of their environment has been influential in guiding later research, including research on parenting-temperament interaction (Bornstein, 2005b). This model, originated by Thomas and Chess,

proposes that better psychosocial functioning will take place when a person's temperament is in accord with environmental demands (Chess & Thomas, 1991). The temperament traits are basic psychological processes that underlie the functioning of all human beings, providing the initial state from which social and personality dispositions develop. Temperament is also related to underlying biological processes and to social behaviour and therefore interactions. On the biological side, temperament establishes connections to animal studies, genes, and neuroscience; on the social side, the child's temperament influences and is influenced by the social environment (Rothbart, 2011).

Thomas and Chess's analysis produced a set of nine temperament categories: activity level, rhythmicity, approach versus withdrawal, adaptability, intensity, threshold, mood, distractibility, and attention span/persistence. Intensive research with factor-analytical methods has shown that these nine dimensions can be reduced to fewer because various factors overlap each other (Bornstein, 2005b).

Here I present current models of temperament, some of them including as many factors as Thomas and Chess's. However, according to authors previously mentioned, the factors can also be reduced to fewer than nine factors. It seems important to emphasise that the factors concerning temperament are similar across the models (De Pauw & Mervielde, 2010; Dyson et al., 2015). In very young children (age 0 to 1), these include factors such as for example anger, discomfort, fear, sadness, soothability, attentional focusing, inhibitory control, low intensity pleasure, and perceptual sensitivity. For children from 1 to 15 years, other factors are also observed, such as activity level, smiling and laughter, also fear, distress, also soothability, and duration of orienting (Gartstein & Rothbart, 2003; Putnam, Helbig, Gartstein, Rothbart, & Leerkes, 2014).

Age moderates the relation between parenting and child temperament (Crockenberg, 1986). Crockenberg observes that parents may begin by investing more time and energy in a distress-prone child but may not be able to sustain this effort over time. Peters-Martin and

Wachs (1984) found that when infants were 6 months old, infant withdrawal, as assessed by mothers' report, was related more to maternal emotional and verbal responsiveness and less to restriction and punishment. By the time the infants were 12 months old, intensity was related less to maternal involvement and more to restriction and punishment. As explained above, temperament seems to be age-dependent and therefore changes over time. An article by Shiner and Caspi (2003) presents the connections between the temperaments and personalities of children up to adulthood. One of the findings of this study is that early measurements of temperament and personality with personality in adulthood only to a limited extent. Temperament can therefore change, this contradicts the original theories of temperament, which state that children have an innate and thus stable temperament.

In recent decades, the volume of research on temperament in childhood has increased substantially. Researchers have created new tools for measuring temperament in childhood (Rothbart, 2011). Most of these tools include questionnaires or observational measures. Because the temperament of young children in particular is still strongly age-dependent, age-specific questionnaires were used in the present studies of this thesis, so that age could not have been a confounding variable. Thanks to Rothbart (2011) and other authors' work, researchers have a variety of age-specific methods at their disposal. These instruments cover an age span from birth to 15 years. Depending on the age range, separate questionnaires can be used, for example 1.5 to 3 years, 3 to 7 years, and so on.

In infancy, temperament is the predominant influence on the child's reactivity. In adulthood, close links remain between the broad factors used to describe personality (e.g. with the Five-Factor Model; Costa et al., 1995) and the factors found within the temperament domain in children (Zentner & Shiner, 2015). These links suggest that temperament dispositions developed early in life may to some extent form the basis of the adult structure of broad personality traits (Rothbart, 2011). Three temperament factors show strong similarities with at least three of the Big Five factors that have emerged from analyses of personality in

adults (Goldberg, 1990). Research suggests that the negative affectivity factor maps on the adult dimension of neuroticism, surgency is related to extraversion, and effortful control is related to control/constraint. A fourth connection exists between the temperamental orienting and openness (Bornstein, 2005; Sanson, Hemphill, & Smart, 2004).

The temperament of a child is already apparent in early childhood and thus has an important influence on its further development. Self-regulation in children and the associated variations can be assessed on the basis of characteristic patterns of positive and negative emotionality, sociability, and attentional persistence. According to Bornstein, these patterns are moderately stable over time, but no means unchanging (Bornstein, 2005b).

A second goal of this thesis is to investigate in greater detail whether or not a child's temperament has an influence on the parenting style and how these factors differ between different family forms: more precisely, between homosexual and heterosexual families.

1.4 Personality of the parents

As mentioned in the introduction, parenting is not only influenced by the parent's parenting style; the personality of the parents is an important factor, which will be discussed in the following chapter. Belsky's (1984) model asserts three principal socio-contextual determinants of parenting: the personality of the parents and other personal psychological resources, the child's individual characteristics, and contextual stressors and supports. In addition to child attributes, relations between parenting and temperament may be influenced by parents' psychological characteristics, such as the personality of the parents, as mentioned above. Mothers' personality characteristics, for example, have also been examined as predictors of parenting style (Clark et al., 2000). The personality of the parents in such cases seems to influence the parenting of the children (Belsky & Barends, 2002). This is elaborated in more detail in the following section.

Longitudinal studies of infants and their mothers suggest that, maternal personality alone seems to predict future parenting behaviour (Clark et al., 2000). In particular, links have been reported between mothers' high levels of negative affectivity-neuroticism and parenting variables such as low responsivity and sensitivity and high power assertion (Kuppens & Ceulemans, 2019). Moreover, a substantial number of studies have examined the relationship between parental personality and parenting by focusing on the personality of only one parent. This approach has often been taken when the personality of the parents gives cause for concern in some way, for example when one parent becomes mentally ill and thus shows a temporary personality change (Kuppens & Ceulemans, 2019). In a meta-analysis of several thousand parent-child dyads that were included in 30 studies, higher levels of extraversion, agreeableness, conscientiousness, and openness and lower levels of neuroticism were related to more warmth and behavioural control, whereas higher levels of agreeableness and lower levels of neuroticism were related to more autonomy support (Prinz et al., 2009).

Belsky et al. (1995) observed mothers and fathers of a firstborn son aged 15 and 21 months in a naturalistic home observation. The behavioural ratings of mothering and fathering were related to the three self-report personality scales (agreeableness, neuroticism, and extraversion). The results indicated that mothering was more consistently predicted by personality, extraversion played a larger role in predicting fathering than mothering, whereas neuroticism was the most consistent predictor of men's and women's parenting (Belsky et al., 1995).

Therefore, the parents' personalities generally influence their parenting substantially (Belsky & Barends, 2002). The extent to which the parents' personalities have an influence in different family forms was examined in the two studies of this thesis. Both studies focused on the personality of the parents as a central element of parenting. A third goal of this thesis is to investigate this question in more detail.

1.5 Parental cooperation

Parental cooperation seems to be an intuitively understood, but not always well-defined, construct in parental research. The term could generally describe the supportive alliance between adults raising one or more children. Recent evidence has suggested the value of conceptualising cooperative dynamics as forces within families that may be at least partially distinct from marital and parent-child relationships (Belsky, Crnic, & Woodworth, 1995). Research has shown that one factor relevant to cooperation is how parents communicate with each other, whether they discuss parental issues, and even if direct communication with their children about the co-parent seems to be an important to cooperation (Boyum & Parke, 1995). A study by Margolin et al. (2001) assessed three samples with a co-parenting questionnaire to analyse parents' perception of one another on three dimensions: cooperation, triangulation, and conflict. The results showed that main effects for child's age and for parents' gender were found for the dimension cooperation. An interaction between parent and child gender was found for triangulation. Regression analyses were consistent with a model of co-parenting that mediates the relationship between marital conflict and parenting (Margolin et al., 2001).

Cooperation is often examined in the context of parent training, such as in families with conflicts (Eyberg & Robinson, 1982). Co-parenting is also a term used when parents separate but still fulfil their parental obligations together: in other words, if parents decide after separation to continue to share the parenting of their children (Pruett & Donsky, 2011; Camara & Resnick, 1989). There are various studies on this subject of separate custody, but cooperation as such is rarely investigated as construct alone. Nonetheless, there are some instruments for this purpose (Margolin et al., 2001), usually within the framework of marriage relationships.

As a fourth goal of this thesis, cooperation between parents was surveyed by means of the parenting style questionnaire (Satow, 2013) in the second study.

1.6 Parenting and sexual orientation

For several decades now, ever more same-sex parents openly living together have had children, whether by adoption, surrogacy, or living with a second homosexual couple of another gender. It is much more difficult for a gay couple to become biological parents of a child. A male gay couple has to overcome many more biological hurdles than their lesbian counterparts. The question is often asked why gays want to become parents at all. Their motivation was not the subject of this thesis, but the question is briefly examined here. Many gay fathers report that they wanted to have children very early, mostly before they knew they were homosexual (Murphy, 2013). As the desire to have children with their partners becomes stronger, many couples choose co-parenting with a lesbian couple, surrogacy, or egg donation or adoption (Patterson & Riskind, 2010).

How the parenting styles of these parents are manifested has been studied frequently, especially in the US. In Europe, there are comparatively few studies that explicitly investigate the parenting style of same-sex parents. The main focus of research has usually been on the well-being of the children in these families (Patterson, 1994), above all because this family form has until recently been regarded as ‘new’ and thus unresearched.

The situation of children with gay fathers is different from that of children with lesbian mothers because it is less common for fathers, whether heterosexual or gay, to be primary caregivers (Golombok et al., 2018). Previous research has mainly examined the sexual identity of children with same-sex parents because the question of whether parents’ sexual orientation influences children's sexual orientation has often been raised (Golombok & Tasker, 1996; Anderssen, Amlie, & Ytterøy, 2002). Further studies have examined general

intelligence, school success (Fedewa & Clark, 2009), social development (Perrin & Siegel, 2013), and stigmatisation by peers (Golombok et al., 2018; Demo, Allen, & Fine, 2000). Studies have shown that the intelligence of children with same-sex parents differs little from that of the general population. Children of homosexual parents show similar achievements in school success (Fedewa & Clark, 2009) as children of heterosexual parents, are socially integrated and develop along similar lines (Perrin & Siegel, 2013). One of the most significant difference for children with same-sex parents is that they may be exposed to greater stigmatisation than children with heterosexual parents because they are brought up solely by women or men and often have to explain how their family is constituted (Golombok et al., 2018).

Patterson (1994) observed that many issues in families are the same regardless of sexual orientation, but other issues that lesbian and gay family members face could be quite different (Allen & Demo, 1995). The term *gay families* used in this thesis is to refer to at least one homosexual male adult rearing a child. The possible sexual orientation of the child is not within the scope of this investigation. Understandably, gay families are also a heterogeneous group; just like heterosexual families, they may differ substantially in age, SES, number of children, and place of residence. This population is therefore potentially as diverse as the population of heterosexual parents (Hicks, 2011). In this thesis, the families are labelled for the sake of clarity.

Although a paradigm shift toward family pluralism is increasingly recognised, there is still a gap in family research regarding these family forms (Allen & Demo, 1995). A substantial proportion of the literature referred to in this thesis comes from the United States. However, some European countries differ widely from the United States in their legal bases, school systems, and attitudes towards the parenting of children. When examining gay parents in Europe, some factors have to be considered, such as the legal situation of gay families in

various countries of Europe. To complement the existing studies, this study focused on gay families in Europe.

In Switzerland, for example, surrogacy is not legal, whereas in other European countries, it is (Ziegler, 2019). Many gay couples in Switzerland who wish to have biological children are therefore forced to travel abroad for surrogacy (to a very large part in the US, which has specific clinics). The return to Switzerland is often filled with legal hurdles; for instance, fathers have to identify the biological mothers. Upon entry, they are then regarded as single fathers, and the children's papers are altered accordingly. When the child arrives at school, various questions have not yet been clarified, for example, as only one father is the legal father, whether or not both fathers are allowed to attend a parental interview. Since 2018, stepchild adoption has been possible in Switzerland, so that fathers who are not biological fathers can apply to adopt the child. This procedure usually takes one year, and there are many hurdles to overcome. For example, the fathers must submit a comprehensive dossier, the children are interviewed alone, the parents are interviewed alone, the family is visited at home unannounced, and the assessment of the situation cannot be contested. For many gay fathers, this process is a substantial burden in addition to work and childcare.

Another way for gay parents to have children is to have a family with a lesbian couple or a lesbian single mother (termed rainbow families). This family form is becoming increasingly popular, mainly in the urban areas of Switzerland (Richarz & Mangold, 2019).

Some biases about gay parents continue even today; in the climate of (hetero)sexism and homophobia in wider society, many people who identify as lesbian or gay do not disclose their orientation for fear of the reactions of others. This is shown by the current discussion on marriage for all in Switzerland. Marriage for all would mean equal rights for same-sex couples, which goes too far for some political parties (Ziegler, 2019).

This societal climate had implications for this study. For example, it was hard to find gay families and to convince them to participate in the study. Among all kinds of gay fathers,

the hardest to find were fathers who had their children in an early heterosexual relationship and came out subsequently. Whereas this group is represented in approximately 1–2% of all gay families, this group of fathers responded only very rarely (less than 1%) to the various invitations to participate in the survey. The group of fathers who had become fathers through surrogacy contacted me much more frequently, because some of them are already used to talking about their family form through media enquiries and social media.

The main question of this thesis is how homosexual parents in Europe parent their children.

1.7 Research questions

When investigating modern family forms (Golombok & Tasker, 2010), the major challenge is to find a representative group. This proved difficult for the reasons mentioned above. Nevertheless, family research in this area should be intensified, because on the one hand the legal foundations are currently being clarified in politics and on the other hand how parents and children interact in these family forms may have a considerable influence on a court or at school, for example. This is where this investigation begins. It is intended to be an exploratory study that sheds light on constructs relating to parenting. Since many previous studies are qualitative in nature, a quantitative setting was chosen.

Parenting is influenced by culture. Homosexual parents may live a different culture and so are subject to different challenges, and these challenges might influence their own personality, their parenting, and, as a consequence, the temperament of their children. In the previous chapters, I discussed theoretical perspectives and empirical evidence of parenting. Whether parenting and sexual orientation could be interrelated is the main theme of this thesis. The systemic models of Belsky (1984) and Darling and Steinberg (2017) discussed above showed that various factors can influence the parenting styles of parents. In this study,

parental sexual orientation is related to the parents' personality factors, the children's temperaments, and the cooperation between partners. The overarching question asked in this thesis project is, does fathers' sexual orientation influence their parenting styles? This main question is broken down in three research questions:

- 1) Is there a relation between parents' sexual orientation and their parenting style?
- 2) How are potential relations between parents' sexual orientation and parenting style observable?
- 3) How is the personality, the temperament, and the cooperation between parents related to the parenting style that the firstborn child receives?

In order to answer these questions, I conducted two studies that investigate parenting styles in these family forms. As the group of gay families is a hard-to-reach population, I had to rely on volunteer participation. All procedures were approved by the local Ethics Commission and performed in accordance with the 1964 Helsinki Declaration and its later amendments.

2 Empirical Studies

In the following two sections, I specify the question that guided the research. Furthermore, I highlight the design and results of the two studies conducted in this thesis project. I only summarise the studies here. The full and more detailed description of each study can be found in Part II of this thesis, in which the two empirical articles are documented in greater detail.

2.1 Study 1

The aim of this study was to answer the question whether sexual orientation influences the parenting style with the firstborn child. Custody cases with same-sex parents increased as early as the 1970s. A central question in each of these custody cases was how the children in these families developed, in particular whether the sexual orientation of one parent could influence the children's sexual orientation. This study followed Belsky's (1984) model; it measured both the children's temperaments and the personalities of the fathers and highlighted connections between these factors. We also compared the personality of the two groups of fathers, because the connection between personality and parenting style has much more frequently been studied with mothers. This study only examined fathers.

Scientists have explored how children develop in gay families (Golombok & Tasker, 2010; Blake et al., 2017). The parenting style of gay fathers has been shown to differ from that parenting style of single fathers. Gay fathers tend to create a more stable environment for their children, are more responsive, explain things to their children more often, and set more boundaries than heterosexual parents (Bigner, 1989; Bigner & Jacobsen, 1989; Bozett, 1989). So far, the parenting style of same-sex parents in Europe has been a rather neglected object of research. Therefore, the goal of Study 1 was to examine this construct and related constructs more closely.

A group of gay fathers ($N = 35$) who become fathers via surrogacy or adoption and a matched group of heterosexual fathers ($N = 33$) were examined. The father's personality, the child's temperament, and the parenting style were investigated with three online questionnaires: a personality questionnaire (NEO-FFI), an age-dependent temperament questionnaire (ECBO, CBQ, IBQ, EATQ), and a questionnaire concerning parenting style (EEI).

Results indicated a few differences between these two groups. Gay fathers reported more warmth than heterosexual fathers (gay fathers: $N = 35$, $M = 6.74$, $SD = 1.34$; heterosexual fathers: $N = 32$, $M = 5.72$, $SD = 1.61$ $t(65) = 2.8$, $p = .006$). They also differed in parental cooperation with the partner: Gay fathers showed more cooperation with their partner than heterosexual fathers (gay fathers: $N = 31$, $M = 6.39$, $SD = 1.94$; heterosexual fathers: $N = 32$, $M = 5.94$, $SD = 1.79$), $t(61) = 0.9$, $p = .344$. No significant differences were found in the other factors.

To rule out the potential bias that the children in one group happened to have more difficult temperaments, we examined the temperamental assessments of the children and the personalities of the fathers. We found no differences in the assessment of the temperament of either group (gay fathers: $N = 35$, $M = 3.8$, $SD = 1.45$; heterosexual fathers: $N = 32$, $M = 4.4$, $SD = 1.52$), $t(65) = -1.7$, $p = .09$. Gay and heterosexual fathers only differed in their Openness to Experience: Gay fathers ($N = 32$, $M = 52.53$, $SD = 9.62$) scored lower than heterosexual fathers ($N = 33$, $M = 58.00$, $SD = 11.66$), $t(65) = -2.1$, $p = .044$. The two groups did not differ with respect to any other personality factor.

Next, we examined the relation between the sex of the firstborn child and the fathers' parenting style. Using an ANOVA with the sex of the firstborn child and the warmth subscale, we found no difference in the parenting styles of fathers towards their firstborn sons and daughters, $F_{1,65} = 1.4$, $p = .234$; adjusted $R^2 = .022$. There was no significant difference

between boys and girls in any subscale of the parenting style. Cooperation with the partner did not differ significantly between boys and girls, $F_{1,61} = 0.94$, $p = .336$; adjusted $R^2 = -.001$.

Finally, we calculated hierarchical multiple regressions to identify the most important predictors of different aspects in fathers' parenting style. Parenting style and cohesion were not associated with any of the variables, but we conducted separate analyses for each of the other subscales. The first step of each model included negative affect as an important construct of temperament, the second step included sexual orientation, and the third step included variables such as age, SES, number of children, time caring for the child, sex of the firstborn child, and some of the fathers' personality factors.

The first model predicted two factors of parenting style. In this model, the difference in warmth was significant, $F_{1,65} = 6.97$, $p = .010$; adjusted $R^2 = .083$. The second model included the sexual orientation, and here, we also found significant differences for warmth, $F_{2,64} = 6.64$, $p = .002$; adjusted $R^2 = .146$. The third model included more variables, such as age, SES, and time caring for the child, and here we also found significant differences in warmth, $F_{13,42} = 3.66$, $p = .001$; adjusted $R^2 = .386$.

Next, we examined the predictors for cooperation with the partner. The first model showed no significant differences, $F_{1,61} = 3.80$, $p = .056$; adjusted $R^2 = .043$. The second model included sexual orientation and also showed no significant differences, $F_{2,60} = 1.98$, $p = .147$; adjusted $R^2 = .031$. The third model included more variables, such as age, SES, and time caring for the child, and here, we found significant differences in cooperation with the partner, $F_{13,38} = 2.58$, $p = .011$; adjusted $R^2 = .288$. Overall, differences between gay and heterosexual fathers were associated with more warmth and cooperation with the partner in the gay fathers' group than in the heterosexual fathers' group.

We interpret the results as indicating that sexual orientation influences parenting style, a result that supports previous findings reported for the US (Bozett, 1989). In agreement with our hypothesis, we found that a father's sexual orientation influences his parenting style with

the firstborn child in that gay fathers report higher scores in the factors of warmth and cooperation with the partner. Cooperation means that the partners discuss the parenting of their children and exchange ideas. These results are also apparent when gay fathers are asked about the division of housework, including parenting, and the division of labour (Tornello et al., 2015). Gay fathers may be in a closer relationship with their partners because they probably discuss the decision to become parents through surrogacy more often and for longer than heterosexual couples do (Tornello & Patterson, 2015). Conversely, emotional warmth, is characterised by mutual trust and recognition. The scale for warmth correlates significantly with the independence scale: Parents who show great appreciation of their children also make an effort to parent their children to be independent and responsible (Satow, 2013).

2.2 Study 2

Study 1 focused on the question of sexual orientation and parenting styles in general, the temperament of the firstborn child, and the personality of the fathers. Only fathers were examined; in gay couples, the fathers who were the first to register were labelled ‘first participants’. The results showed that there are differences in the parenting style, such as in the factors of warmth and cooperation. The personalities of the fathers also differed. This led to the second question of how the cooperation between the parents in the different family forms is observable. This was addressed in Study 2, which more closely investigated cooperation between parents and their personalities, this time including mothers. The aim of the second study was to answer the question whether the sexual orientation, the personalities of the parents, and the cooperation between them in parenting are associated or not. This question was based on the results of the first study, which showed differences in cooperation and a personality factor, openness to experience.

When investigating parenting styles, the main focus of research is often on the relationship between mothers and their children or on that specific relationship and the sex of the child. Fathers are included in such analyses less often. For example, previous research has examined the mothers' personality characteristics as predictors of parenting style. When infants and their mothers are examined longitudinally, maternal personality alone seems to predict future parenting behaviour (Clark et al., 2000). In particular, links have been reported between mothers' high levels of negative affectivity and neuroticism and parenting variables such as low responsivity, low sensitivity, and high power assertion (Kuppens & Ceulemans, 2019). Besides that, a substantial number of studies have examined the relationship between one parent's personality and parenting, often when the parents' personality gives cause for concern in some way, for example when one parent become mentally ill and thus show a temporary personality change (Kuppens & Ceulemans, 2019). In a meta-analysis using several thousand parent-child dyads from a total of 30 studies, higher levels of extraversion, agreeableness, conscientiousness, and openness and lower levels of neuroticism were related to more increased warmth and behavioural control, whereas higher levels of agreeableness and lower levels of neuroticism were related to more autonomy support (Prinz et al., 2009). Therefore and in general, the personality of the parents has a substantial influence on their parenting of the children (Belsky & Barends, 2002).

The gender of parents and their sexual orientation has been shown to have only a minor influence on children's psychological adjustment and social success (Biblarz & Stacey, 2010). For example, the level of parent-child attachment does not seem to be associated with parents' sexual orientation in families with adopted children (Erich et al., 2009). As Khajehei (2016) observes, "same-sex parents share the burden of child care equally and participate more often in family interactions, whereas heterosexual parents report specialization in parenting, indicating that mothers do more housework and child care than fathers do" (p. 2). Whether similar results can be found for gay families is one of the questions that were

addressed in Study 2. A meta-analysis reported two studies that found that gay male couples parented more equally and compatibly than heterosexual couples, although somewhat less equally than lesbian couples (Mallon, 2004; Bigner, 1989). Bigner and Jacobsen point out that when two gay men raised their children, they did so in a way that seems closer, but not identical, to that of two lesbian women than to a heterosexual woman and man (Bigner & Jacobsen, 1989). Other findings show that gay male parents are less likely to hit their children than heterosexual couples and even somewhat less than lesbian parents (Johnson & O'Connor, 2002). Perhaps it is possible to say that parenting by gay men more closely resembles that by mothers than by heterosexual fathers (Biblarz & Stacey, 2010).

Because partners in gay and lesbian couples create their relationships with less reference to the traditional roles played by each partner and come to their relationships with a history of socialisation in the same gender role, they may more easily apply an ethic of equality (Blumstein & Schwartz, 1983) and as a result experience higher relationship quality than heterosexual couples (Kurdek, 2001). In Study 1, we found that self-reported cooperation among gay fathers was higher than among heterosexual partners.

A group of gay parents ($N = 24$) who became fathers via surrogacy or adoption and a comparable group of heterosexual matched parents ($N = 40$, thereof 20 fathers and 20 mothers) were examined. Two online questionnaires were used to investigate the parenting style and the personalities of the parents.

Results indicated differences between these two groups. The average age for the group of gay families was 40.0 years ($SD = 4.3$) for Father 1, and the average age was 41.7 years ($SD = 6.6$) for Father 2. The age difference between the two partners was 4.8 years ($SD = 2.4$). A large number of the gay fathers had a university degree (91.7%) and a high socioeconomic status (Father 1 $M = 70.8$ and Father 2 $M = 71.8$). Socioeconomic status was measured with the International Standard Classification of Occupations (ISEI; Ganzeboom, De Graaf, & Treiman, 1992 with a scale from 16 to 88).

At the time of data collection (January 2018 to January 2019), 41.7% of the fathers in gay families reported spending more than 50 hours per week caring for their firstborn child (category 1: 0-10 h, category 2: 10-20 h, category 3: 20-30 h, category 4: 30-40 h, category 5: 40-50 h, and category 6: more than 50 h), $M = 3.8$, ($SD = 1.25$, range = 40 h). The mean number of children was $M = 1.9$ ($SD = 0.5$, range = 1- 4). The gay parents showed similar values in cooperation: for Fathers 1, $M = 7.3$ ($SD = 1.3$, range = 1- 9) and for Fathers 2, $M = 7.5$ ($SD = 0.7$, range = 1- 9). The values relating to personality factors differed less within a gay couple than between heterosexual parents.

The average age for the group of heterosexual fathers ($n = 20$) was 42.2 years ($SD = 7.8$) and for the mothers ($n = 20$) 38.9 years ($SD = 4.6$), with an average age difference between the two partners of 4.7 years ($SD = 4.6$). A substantial number of the parents reported having a university degree (fathers 90.0% and mothers 80.0%) and a high socioeconomic status ($M = 64.7$ for the fathers, $M = 68.1$ for the mothers). The mean number of children was $M = 2.0$ ($SD = 0.7$, range = 1- 4). A total of 10.0% of the fathers reported spending more than 50 hours per week caring for their firstborn child, $M = 3.5$, ($SD = 1.23$, range = 40 h), while 40% of the mothers reported spending more than 50 hours per week caring for their firstborn child. The heterosexual parents showed similar values in cooperation: for mothers $M = 6.3$ ($SD = 1.9$, range = 1- 9) and for fathers $M = 6.2$ ($SD = 1.5$, range = 1- 9). The values relating to personality factors differed more within a heterosexual couple than between gay parents.

The personality of the parents was determined from five factors: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (Costa et al., 1995). We used t -tests to examine the individual factors between the two groups. We found some differences between the factors of personality and parenting style between the two groups. The group of gay parents reported slightly higher values for extraversion (father 1: $N = 12$, $M = 6.8$, $SD = 1.9$ and father 2: $N = 12$, $M = 5.8$, $SD = 2.4$); $F_{3,51} = .06$, than heterosexual parents (mothers: $N = 20$, $M = 6.7$, $SD = 1.5$ and fathers: $N = 20$, $M = 6.4$,

$SD = 1.6$). The two groups differed in conscientiousness, with the gay parents scoring higher values (Father 1: $N = 12$, $M = 6.2$, $SD = 2.0$ and Father 2: $N = 12$, $M = 6.6$, $SD = 1.6$); $F_{3,51} = 7.3$, than the heterosexual parents (mothers: $N = 20$, $M = 7.0$, $SD = 1.8$ and fathers: $N = 20$, $M = 5.0$, $SD = 1.1$). The groups did not differ with respect to neuroticism (gay parents: father 1: $N = 12$, $M = 3.4$, $SD = 2.8$ and father 2: $N = 12$, $M = 4.4$, $SD = 2$; heterosexual parents: mothers: $N = 20$, $M = 4.8$, $SD = 1.6$ and fathers: $N = 20$, $M = 3.8$, $SD = 2.1$); $F_{3,51} = .08$. Neither did the groups differ with respect to openness to experience (gay parents: father 1: $N = 12$, $M = 5.6$, $SD = 1.1$ and father 2: $N = 12$, $M = 5.9$, $SD = 2.0$; heterosexual parents: mothers: $N = 20$, $M = 6.2$, $SD = 1.6$ and fathers: $N = 20$, $M = 6.3$, $SD = 2.6$), $F_{3,51} = .04$. Finally, no group differences were found for agreeableness (gay parents: father 1: $N = 12$, $M = 6.8$, $SD = 2.3$ and father 2: $N = 12$, $M = 6.8$, $SD = 2.2$; heterosexual parents: mothers: $N = 20$, $M = 7.3$, $SD = 1.5$ and fathers: $N = 20$, $M = 6.7$, $SD = 2.0$), $F_{3,51} = 0.9$. In general, the various family types are very similar in many factors and show few significant differences.

The group of gay fathers showed similar values in the cooperation: For father 1 $M = 7.3$ ($SD = 1.3$, range = 1- 9) and father 2 $M = 7.5$ ($SD = 0.7$, range = 1- 9).

Secondly, we calculated the cooperation factor between the family types in a four-field table. We used the values of the cooperation factor, which was collected in the EEI using seven items. Significant differences were found between gay and heterosexual families in cooperation between the two partners. The results indicate higher scores in cooperation for the gay parents than the heterosexual ones, $\chi^2(1, N = 64) = 4.1$, $p = .043$.

Third, we calculated hierarchical multiple regressions to identify the most important predictors of various aspects of parenting style, cooperation between the partners, the personalities of the parents, and their sexual orientation. The first step included the parents'

sexual orientation, the second included the personality factors of the parents, and the third included the parenting style factors.

The first model predicted the factors of cooperation and sexual orientation. The correlation between cooperation and sexual orientation was significant, $F_{1,62} = 10.9, p < .01$; adjusted $R^2 = .14$. Gay fathers thus show higher values in cooperation. The second model included the five factors of personality and here, we also found significant correlations for sexual orientation and for the personality factor of neuroticism, $F_{6,54} = 4.0, p < .01$; adjusted $R^2 = .25$. Gay fathers showed higher values in neuroticism.

The third model included the factors of the parenting style, and here we also found significant differences in warmth, $F_{10,54} = 4.6, p < .001$; adjusted $R^2 = .40$. Overall, the gay parents showed higher values in the two parenting styles of warmth and independence than the heterosexual parents.

In Study 2, we assessed similarities and potential differences between gay and heterosexual families in the parents' personalities, the level of parenting cooperation, and parenting styles. We examined various constructs concerning parenting, such as the parents' personality, sexual orientation, and cooperation within parent couples. The main results showed that parents' sexual orientation influenced their parenting styles. This result replicates previous findings reported for the US (Bozett, 1989) in a European sample.

We also assessed the parents' personality. As consistently reported in previous studies, higher levels of extraversion, agreeableness, conscientiousness, and openness and lower levels of neuroticism (Costa et al., 1995) were related to more warmth and behavioural control, whereas higher levels of agreeableness and lower levels of neuroticism were related to more autonomy support (Prinz et al., 2009). In line with previous literature, we found that a higher level of conscientiousness had an influence on the parenting style. Conscientiousness reflects the extent to which a person is well organised, responsible, decisive, dependable, hardworking, and ambitious (Bornstein, 2005a). Gay parents in this study showed overall

higher levels in conscientiousness, which might explain why gay parents showed a slightly warmer parenting style (Neresheimer & Daum, 2020). Gay parents may show a more reflective attitude towards the desire to have children, as the hurdles to having children are much higher than for heterosexual couples. Gay parents might thus be in a closer-knit relationship with their partners (Tornello & Patterson, 2015).

The analyses of parental cooperation showed a reliable difference between gay and heterosexual parents. These differences showed that gay parents cooperated more closely on, for example, the division of labour (Block et al., 1981). In our study, the mean level of cooperation was lower in heterosexual parents than in gay ones. Previous research has shown that cooperation among partners is dependent on four other factors: SES, age of parents, income, and number of siblings (McHale, 1997). We are aware that because the data used in this study were collected via self-report, they are susceptible to subjective biases. It might very well be the case that if the couples had been examined in everyday situations in which cooperation was required, the results might look different. Nonetheless, the data are in line with previous research showing that homosexual families tend to be more cooperative than heterosexual families in their division of labour between housework and parenting (Tornello & Patterson, 2015).

The parenting styles of the two groups differed significantly in warmth, with gay parents indicating higher values here. Gay fathers also showed higher values in warmth in Study 1, in which only gay and heterosexual fathers were compared with each other without mothers.

In summary, the present study compared gay and heterosexual parents' their personalities, parenting styles, and parenting. The results showed close similarities between gay parents and heterosexual parents in personality and parenting styles. The main difference was that gay parents reported higher values in cooperation than heterosexual parents.

3 General discussion

In this section, I embed Studies 1 and 2 in the broader scope of empirical evidence and theoretical considerations. The sequence of the discussion reflects that of the introduction. I discuss how the findings in Studies 1 and 2 provide evidence about same-sex parents in Europe and critically illuminate the constructs containing parenting against the background of the results reported. To conclude, I highlight the limitations of Study 1 and 2 and propose new approaches for future research.

3.1 Parenting styles

The first research question and the main title of this thesis project address whether both parents being fathers influences the parenting style of parents. Parenting is a multidimensional construct that presents particular challenges to researchers (Belsky, 1984; Darling et al., 2017). Various factors the child's temperament, the parents' personalities and marital relationship, and the family's social context have a direct or indirect influence on parenting and therefore on parenting style. Study 1 examined the parenting style, the temperament of the firstborn child, and the personality of the father and demonstrated significant differences in parenting styles between gay fathers and heterosexual fathers. The gay-parent families reported slightly higher values in warmth and cooperation between each other. These two factors were determined with the EEI (Satow, 2013) and are part of the parenting style.

Similar results were reported in the 1980s in studies based on interviews with gay fathers in the U.S. The authors of these studies reported that gay fathers showed a more warm-hearted parenting style and rated gay fathers' cooperation as higher than that of heterosexual couples (Bigner, 1989; Bigner & Jacobsen, 1989; Bozett, 1989). The fact that

these results have now been replicated 30 years later in a quantitative study in Europe suggests that gay fathers' self-assessment of their parenting styles is consistent.

Study 2 corroborated Study 1 by showing that there are still some differences in parenting style when mothers were included. Our analyses in Study 2 showed that cooperation between partners also showed significant differences between family forms when both partners completed our questionnaires. Although mothers were involved in Study 2, gay-parent families reported higher values in warmth. Research has shown that mothers tend to be more warm-hearted than fathers (Huston & Aronson, 2005). But the fact that they sometimes differ quite clearly from gay fathers is certainly an interesting result and should be investigated further.

Both studies showed that even if mothers were involved, the self-descriptions of parenting style differed to some extent. It must nevertheless be noted that social desirability may be a particularly important source of bias due to the sensitivity of the topic of raising children. A selection bias may also play a role; because ours was a voluntary sample, it could also be argued that parents who were happy to participate in studies were those most interested in parenting. It might be this fundamental interest in child rearing and not necessarily sexual orientation which led to these differences. However, it is correct to state that, to date, it is unclear which factors lead to a difference in parenting styles.

3.2 The firstborn child's temperament

The second question of this thesis project was whether the firstborn child's temperament has an influence on the parenting style or not. We mainly examined the temperament of the firstborn child in the first study. The fathers completed an age-related questionnaire on the child's temperament, because age is an important factor when investigating temperament. This has been confirmed by research using several models with

mostly similar factors (De Pauw & Mervielde, 2010; Dyson et al., 2015). In this thesis, Study 1 showed that gay fathers reported less irritation about any negative temperament in their firstborn children. Higher values in temperament correlated positively with gender; boys showed a higher score in negative affect in temperament. The gay dads who were the first in their couple to respond to our questionnaire spent significantly more time with their children than heterosexual fathers did, although the children of both groups were about the same age. When fathers spend more time with the children, it might be that they develop a closer attachment to the child (Huston & Aronson, 2005; Starrels, 1994). That might also explain why gay fathers report less irritation when their children's temperament has negative aspects.

This implies that parents differ in how they assess their children's temperaments. It is reasonable to conclude that gay parents not only view their parenting style differently from their heterosexual counterparts' but also perceive their firstborn children's temperaments through slightly different lenses. The gay fathers in our study assessed their children's temperaments quite realistically but reported feeling stressed less quickly than their heterosexual counterparts if their children did not behave as they expected.

Here too, however, social desirability could be a source of bias that needs to be examined more closely. Comparing self-descriptions with actual observations of parents' behaviour might reveal substantial differences.

3.3 Personality of the parents

The third question of this thesis project was whether the personality of the parents has an influence on the parenting style or not. A number of studies showed close links between the personality and the parenting style (Clark, Kochanska, & Ready, 2000; Belsky, Crnic, & Woodworth, 1995). In Belsky's (1984) study, mothering was more consistently predicted by personality, extraversion played a larger role in predicting fathering than mothering, and

neuroticism was the most consistent predictor of men's and women's parenting (Belsky et al., 1995).

We found in Study 1 that gay and heterosexual fathers differed in their openness to experience in the NEO-FFI (Costa et al., 1995). The heterosexual fathers assessed themselves as being more open than the gay fathers. Other research found differences in the dimension of neuroticism but no differences in the dimension of openness (Kurdek, 2001). Why heterosexual fathers assess themselves as being more open in the current study should be investigated in further research.

We further assessed the parents' personality in Study 2 and included heterosexual mothers. As consistently reported in previous studies, higher levels of extraversion, agreeableness, conscientiousness, and openness and lower levels of neuroticism (Costa et al., 1995) were related to more warmth and behavioural control, whereas higher levels of agreeableness and lower levels of neuroticism were related to more autonomy support (Prinz et al., 2009). In line with previous literature, we found that a higher level of conscientiousness influenced parenting style. Further, gay parents in Study 2 showed overall higher levels in conscientiousness, which might explain the effect of gay parents showing a slightly warmer parenting style (Neresheimer & Daum, 2020). Gay parents may reflect more deeply on their desire to have children, as the hurdles to having children are much higher than in heterosexual couples. Gay parents might thus be in closer-knit relationships with their partners (Tornello & Patterson, 2015).

However, there are at least two issues that need further attention when discussing Studies 1 and 2: the parents' personalities seem to be gender dependent. As mentioned above, mothers and fathers differ significantly in how they raise their children.

In sum, Studies 1 and 2 indicate that the influence of parents' personalities on parenting requires further study. In particular, the question of whether it is only gender or other factors needs closer examination.

3.4 Parental cooperation

A somewhat more difficult construct to measure was the cooperation between the two partners. Study 1 clearly showed that at least one of the partners in each of the gay families rates their cooperation more highly than do their heterosexual counterparts.

In Study 2, the analyses of parental cooperation showed a reliable difference between gay and heterosexual parents. These differences showed that gay parents cooperated more strongly in, for example, the division of labour (Block et al., 1981). In Study 2, the mean level of cooperation was lower in heterosexual parents than in gay ones. Previous research has shown that cooperation among partners is dependent on a number of other factors, such as SES, age of the parents, income, and number of siblings (McHale, 1997).

We are aware that because the data used in this study were collected via self-report, they are susceptible to subjective biases. It might very well be the case that if the couples had been examined in everyday situations, in which cooperation was required, the results might look different. Nonetheless, the data are in line with previous research showing that homosexual families tend to be more cooperative than heterosexual families in their division of labour between housework and parenting (Tornello & Patterson, 2015).

3.5 Parenting and sexual orientation

The main question of this thesis examined fathers' sexual orientations. The number of rainbow families and exclusively gay families is increasing in Switzerland and across Europe, and these families have children who encounter a predominantly heteronormative environment, so it is imperative to understand how these families raise their children: for example, what values they give their children. This thesis project did not set out to examine parents' sexual orientations as such, but the parenting styles of homosexual fathers. Related attitudes towards children, for example how the child's temperament is handled, were

examined against the background of sexual orientation. The three questionnaires were adapted to their target groups: for example, the question about marital status was not asked of gay fathers. Because the phenomenon of gay families is relatively new in European countries, the children of these families are younger than in the American studies. Therefore, different questionnaires were used than in American studies.

Another hurdle was that many homosexual parents, for various reasons, do not participate in such investigations, and the few who do usually show a relatively open and natural way of dealing with their homosexuality (Fthenakis & Minsel, n.d.). Studies are needed that have larger samples and thus represent the demographic diversity of homosexual families more completely. Most studies have interviewed white, educated middle-class families from urban areas in the US. More research is needed on ethnicity, family economic differences, and cultural environments (Patterson, 2006).

Overall, it can be said that homosexual fathers prove to be competent fathers whose children benefit more frequently from an authoritative parenting style than children in heterosexual partnerships. Special emphasis should again be placed on the fact that it is less important to the children whether their father or mother is homosexual (Fthenakis & Minsel, n.d.).

3.6 Limitations and future directions

A number of limitations should be considered. The first limitation was the moderate sample size gathered from this hard-to-reach population. This means that whereas the results generally replicated previous findings from the United States, they still have to be interpreted with great care. The second limitation was the homogeneity of the participant groups, who were generally well-educated and indicated a similar income; this may thus have led to such homogeneous results. This homogeneity may have arisen from the use of recruitment platforms that may not have been sufficiently diverse. However, while this homogeneity can

be considered a limitation, it might also be a strength, because the variety caused by differences in SES and similar other factors is minimal. Thirdly, the use of volunteers may limit the generalisability of the results. Although it was not possible to obtain a representative sample of gay fathers, a variety of recruitment procedures were used to access as diverse a sample as possible.

Future research should attempt to collect data from more diverse and larger samples. The use of Internet data collection allowed us to include participants from all over Europe. This methodology allowed for additional variation in parent and child age, biological relatedness, and relationship length. The participants completed questionnaires on their parenting themselves. Thus, their responses could have been influenced by social desirability, as research has shown that gay fathers are more stigmatised than other fathers (Golombok et al., 2018). As noted, the studies reported in this thesis have an explorative character.

4 Conclusion

This thesis project investigated the parental styles in gay and heterosexual families. It shows that parenting differs between heterosexual and homosexual families. Two studies investigated parenting style and related factors of homosexual and heterosexual couples. Study 1 showed connections between the parenting style, parents' sexual orientations, and firstborn children's temperaments. The homosexual parents reported a warmer parenting style, more cooperation, and less irritation with their firstborn children's temperaments. The influence of parents' personalities on their parenting was further examined in Study 2, which explicitly investigated not only parents' personalities but also investigated the cooperation between the two partners. Here, too, both family forms also had many similarities and only differed in terms of personality factors. In summary, the findings of this doctoral thesis indicate differences in the parenting styles between homosexual and heterosexual parents. These are in part significant but should also be viewed with caution due to the studies' use of parents' self-assessment and the small sample size.

This thesis project has provided evidence about rainbow families and exclusively gay families in Europe. The number of these family forms is increasing, which is why it is important to better illuminate how gay fathers parent and convey more information to the still prevalent heterosexual world. It makes sense, for example, to provide this information to teachers, nursery staff, and guardianship authorities, as dealing with gay families is still heavily dependent on the attitudes of individuals. Here, science can provide facts that may lead to a better understanding between these two groups. Overall, this thesis project contributes to a deeper insight into the parenting styles of gay families.

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Part II

A Study 1: Parenting styles of gay fathers

A similar version of this study has been published in *Journal of GLBT Family Studies*.

The full reference is: Neresheimer, Ch. D. & Daum, M. M. (2020). Parenting styles of gay fathers. *Journal of GLBT Family Studies*

<http://dx.doi.org/10.1080/1550428X.2020.1806769>

Abstract

Little is known about the parenting style of male couples who become fathers via surrogacy, adoption or fostering. In a European study, 35 gay fathers and 33 heterosexual fathers answered questionnaires with respect to their parenting style with their first-born child, temperament characteristics of that child, and their own personality. The results indicate that gay fathers show higher levels of warmth and cooperation with their partner than heterosexual fathers. Gay fathers also reported less irritation if their first-born child displayed a negative temperament. No differences in the parenting style were found with respect to the sex of their child. Our results contribute to the limited empirical research about same-sex male parents and parenting style.

Key words: parenting styles; father; gay men; parenthood

1. Introduction

Parenting styles

The term *parenting style* describes the interindividual variable from an intraindividual perspective but intraindividually comparatively stable, to respond to parenting situations with specific child-related behaviors (Hurrelmann & Lösel, 1990). In previous research, factor analyses of the data have typically identified two dimensions of parent behavior: One factor consisted of parental acceptance, support, or warmth, and the other consisted of constructs related to parental control (Power, 2013). The scales for the factor “control” in these studies ranged from dominance versus submission, detachment versus involvement, permissiveness versus strictness, and autonomy versus control (Power, 2013). Research conducted in the sixties and seventies regards the parenting style as one variable that explains the emergence of individual personality traits in children (Rothbart, 2011). One very prominent and frequently cited work is that of Diana Baumrind (Baumrind, 1967; Baumrind, 1971). In her early work, Baumrind identified three parenting styles: *authoritative*, *authoritarian*, and *permissive*. According to Baumrind’s definition, authoritative parents set firm limits, but were warm and responsive to the needs and wishes of their children. Children of authoritative parents were high in social competence, self-esteem, and social responsibility. Authoritarian parents were described as strict, demanding, and not responsive to their children’s needs. Their children, in turn, displayed high levels of antisocial behavior and anxiety. Permissive parents made few demands on their children. Their children showed low values of self-control and achievement (Grusec & Hastings, 2014). Later, Baumrind extended her typology with a fourth parenting style: “neglectful” (Baumrind, 1991).

Parental support and parental control

Parental support pertains to the affective nature of the parent-child relationship, indicated by showing involvement, acceptance, emotional availability, warmth and responsivity (Baumrind, 1991; Cummings, Davies, & Campbell, 2002). Parenting styles occur frequently within a cultural belief system that influences attitudes towards particular parenting practices, such as punishment (Ateah & Durrant, 2005). This leads to the question whether other contextual aspects have a similar influence on parenting. The present study focuses on the family form. We ask whether or not the sexual orientation of parents has an influence on their parenting style¹.

Parenting style is determined by a number of factors, see for example the theoretical models of Belsky (1984) and Steinberg (Darling et al., 2017). Here we focus on three factors derived from these models: the children's personalities (i.e. their temperament), the parents personalities, and cooperation between the parents (Belsky & Barends, 2002).

Temperament of the children

Various authors have offered different definitions of *temperament* in children. One of the most widely accepted definitions has been given by Rothbart (1986), who defines temperament as “constitutionally” based individual differences in reactivity and self-regulation. The term “constitutional” refers to the biological bases of temperament. In her sense, reactivity means how disposed we are to emotional, motor, and attentional reactions (Rothbart, 2011). Mostly similar factors are used to report temperament in research using different models (De Pauw & Mervielde, 2010; Dyson et al., 2015). The factors differ slightly depending on the age of the children. In very young children (age 0-1) the following factors

1 In this context, it is important to mention that the majority of the parenting style research described here was carried out predominantly in Western cultures. There are still few studies that are implemented in other cultural contexts.

are most evident: anger or frustration, discomfort, fear, sadness, and soothability or falling reactivity and attentional focusing, inhibitory control, low-intensity pleasure, and perceptual sensitivity. For children from 1-15 years of age, slightly different factors are reported: activity level, smiling and laughter, fear, distress to limitations, soothability, and duration of orienting (Gartstein & Rothbart, 2003; Putnam, Helbig, Gartstein, Rothbart, & Leerkes, 2014). Given the influence of the child's temperament on their parents parenting style, the present study also asked two further questions: whether the fathers' parenting style is related to the temperament of the child (Betts et al., 2009) and whether the child's sex has an influence on the parenting style of gay and heterosexual fathers.

Personality of the parents

A substantial number of studies have examined the relationship between *parental personality* and parenting. Often, research focused on the personality of only one parent, in particular when the personality of the parents gives cause for concern in some way, for example when one parent become mentally ill and thus show a temporary personality change (Kuppens & Ceulemans, 2019). In a meta-analysis using several thousand parent-child dyads taken from a total of 30 studies, higher levels of extraversion, agreeableness, conscientiousness, and openness and lower levels of neuroticism were associated with more warmth and behavioural control, whereas higher levels of agreeableness and lower levels of neuroticism were related to more autonomy support (Prinzle et al., 2009).

Parental cooperation

Cooperation or coparenting seems to be an intuitively understood, but not always well-defined construct in parental research. Generally, the term describes the supportive alliance between adults raising a child or children. In the 1990s, McHale (1997) already suggested that it is valuable to conceptualize cooperative or coparenting dynamics as forces

within families that may be at least partially distinct from marital and parent-child relationships. Research has shown that three relevant factors for cooperation are: first, the way parents communicate with each other; second, how they discuss parental issues with each other; and third the direct communication with their children about the other parent (Boyum & Parke, 1995).

Parenting and sexual orientation

When custody cases with same-sex parents became more common in the 1970s, research began to explore how children in these families develop (Golombok & Tasker, 2010; Blake et al., 2017). In the early years of this research, the focus was primarily on lesbian mothers and their children (Fedewa, Black, & Ahn, 2015; Goldberg, 2010; Patterson, 2006). About a decade later, research started to include gay fathers as well (Bozett, 1980). It is not clear whether the situation of children with gay fathers is different from the one of children with heterosexual parents because it is, at least in Europe, still less likely for fathers, to be primary caregivers (Golombok et al., 2018; Lamb, 2010). In previous research, the sexual identity of children with same-sex parents was mainly examined because the question of whether parents influence children's sexual orientation has often been raised (Golombok & Tasker, 1996; Anderssen, Amlie, & Ytterøy, 2002). Further studies have examined general intelligence, success at school (Fedewa & Clark, 2009), social development (Perrin & Siegel, 2013), and stigmatization by peers (Golombok et al., 2018; Demo, Allen, & Fine, 2000). Children with same-sex parents may be exposed to greater stigmatization than children with heterosexual parents because they are brought up by women or men only (Golombok et al., 2018).

Fathers, whether heterosexual or gay, usually build relationships with their children similarly to the way mothers do with regard to care, interaction, use of language, and emotional support. Nevertheless, fathers are still not typically characterized as having the

ability to be children's primary caregivers (Golombok et al., 2018; Lamb, 2010). Mothers, whether heterosexual or lesbian, are more likely than fathers to be described as having the ability to raise children (Golombok et al., 2018; Lamb, 2010). Accordingly, research into fathers in general and gay fathers in particular is increasingly important because family structures have substantially changed over the course of the last thirty years. The legal situation of parents has changed, as has social acceptance of, for example, single-parent families (Golombok et al., 2018). This is backed up further by results obtained by the Central European Network of Fatherhood (CENOF), which focuses on questions relating to paternity (CENOF, n.d.). One of the main objectives of the CENOF research study is therefore to investigate the relationship between stress levels at work, the amount of time fathers invest in their children or in the father-child relationship, and the quality of paternal relationships.

Research into many different cultures has shown that paternal warmth is an important factor in raising children and is significantly beneficial to a child's development in the long term. The degree of attention by a father as a caregiver can – just as with mothers as primary caregivers – help predict the child's future cognitive, emotional, and social competence (Rohner & Veneziano, 2001; Veneziano, 2003). Research into Western cultures has shown that paternal warmth correlates highly with fewer childhood emotional and behavioral problems, less substance abuse, and less delinquency in adolescents. Paternal warmth therefore acts as a good predictor of childhood and adolescent development (Rohner & Brothers, 1999; Tacón & Caldera, 2001).

Despite including similar concepts, the parenting styles of fathers and mothers are not identical. Fathers often parent sons and daughters differently because they interact more frequently with their sons. Fathers spend more time with their sons, and sons themselves report feeling closer to their fathers than daughters do (Harris & Morgan, 1991). Other studies found that the parent's gender is more salient than child gender in the prediction of parenting style in early childhood (Russell et al., 1998). Fathers show a more authoritarian parenting

style, and mothers a more authoritative one (Conrade & Ho, 2001). Until now, research on the parenting styles of fathers has solely looked at heterosexual fathers. Whether or not the above-mentioned differences also apply to gay fathers is one of the research questions we aim to answer in this study.

Children growing up with two fathers is a relatively recent development in Western cultures. A proportion of 2.7-4.9 % of American men reported living in a same-sex partnership and an estimated 1-12 % of all children in the US are raised by same-sex parents (Miller & Price, 2014; Laumann, Gagnon, Michael, & Michaels, 1994). Using data from the Gallup Daily Tracking Study in 2012, it was estimated that, in the US, 20 % of gay men were raising children under the age of 18 (Gates, 2013). Similar percentages are assumed for Europe, whereby the legal situation in the respective country needs to be considered (Golombok & Tasker, 2010). Some countries in Europe (e.g. Switzerland or Italy) prohibit same-sex marriage and also surrogacy for same-sex parents.

Nevertheless, many gay men in the US and in Europe have become fathers in the last decades (Tornello & Patterson, 2015). The ways in which gay men become fathers vary highly: Some men initially married a woman, have children with her, and only later came out as gay, often in the context of divorce. Because gay men have begun to come out earlier in life, some have explored the idea of fatherhood in the context of already established gay identities (Berkowitz & Marsiglio, 2007; Johnson & O'Connor, 2002; Golombok & Tasker, 2010). As a result, many gay men today consider a wider variety of routes towards parenthood, such as private adoption, foster-to-adopt, or via surrogacy (Tornello & Patterson, 2015). Some countries in Europe have legalized same-sex marriage, which has in some cases opened up the possibility for homosexuals to adopt children (NW et al., n.d.). There are, however, very large differences in the legal basis, particularly with regard to the children involved.

The context and the preconditions of parenting might differ between gay and heterosexual fathers. Gay fathers tend to create a more stable environment for their children, are more responsive, explain things to their children more often, and set more boundaries than heterosexual parents (Armesto, 2002; Bigner & Jacobsen, 1989; Bozett, 1989). Overall, gay fathers have a distinctively authoritative parenting style, and do not see themselves in the role of the “family breadwinner” (e.g. Flaks, 1992). In terms of their children, gay fathers are much less likely than heterosexual fathers to promote such a traditional cliché and gender-specific behaviour (Turner et al., 1990). In particular, children benefit from the less formal fixation on traditional role models as well as from an open and democratic family atmosphere. This often enables the training of particularly desirable attitudes. For example, Bozett (1989) has shown that children of gay parents, as compared to children of heterosexual parents, behave much more tolerantly towards persons who are different. They are less likely to marginalize children who are different. They have a more liberal attitude towards being different. Research has shown that the fact that gay fathers are aware that their homosexuality could be a reason for many others to monitor their child-rearing behavior more closely (Bigner & Jacobsen, 1989). This might be a reason why gay fathers pay comparably more attention to their own parenting style. According to Allen and Burrell (1997), there are few differences in the parenting styles of fathers between gay and heterosexual fathers. To our knowledge, few quantitative studies have explicitly examined the parenting style of gay fathers in comparison to the parenting style of heterosexual fathers. The major aim of the present study was thus to compare the parenting style of gay and heterosexual fathers with regard to their first-born child, and to investigate whether the sexual orientation of the father is related to the parenting style.

In the current study, we aimed to answer the following research questions: 1) Does the parenting style of gay and heterosexual fathers differ and if so, how? 2) How does the temperament of the first-born child influence their fathers parenting style? 3) How does the

personality of the fathers influence their parenting style? Based on the previous literature discussed above, we formulated the following three hypotheses:

- 1 The father's sexual orientation correlates with his parenting style with his first-born child (Armesto, 2002).
- 2 The sex of the first-born child does not correlate with the father's parenting style (Golombok et al., 2018).
- 3 The temperament of the first-born child correlates with on the father's parenting style (Rothbart, 2011).

2. Method

Participants

Because the study has an explorative character for fathers in Europe, we decided to use a cross-sectional survey by means of online questionnaires. The sample consisted of 51 gay fathers and a comparison group of 60 heterosexual parents (mothers and fathers). Because the first group is a small and hard-to-reach population, it was necessary to rely on a volunteer sample. The gay fathers were recruited through gay social groups, websites and e-mail lists, and newsletters of relevant organizations in Europe. For the recruitment of the group of the heterosexual partners, social media, newsletters and e-mail lists of relevant organizations were used and care was taken to ensure that they could be matched with gay fathers in terms of SES, age of the children, and all relevant factors. All demographic information is listed in Table 1.

Table 1

Demographic information of gay fathers and heterosexual fathers (N = 68)

Variable	Gay fathers		Heterosexual fathers		T-Test
	M	SD	M	SD	
N	35		33		
Age	42.3	5.4	43.9	6.8	t(66)=1.1 p=.28
Age difference between partners	4.9	3.6	4.9	5.6	t(55)=.49 p=.26
Socioeconomic status (measured with ISEI)	66.7	11.6	67.0	12.4	t(61)=.03 p=.92
Relationship status (1 = single; 2 = in a relationship)	1.8	0.4	1.9	0.3	t(66)=1.3 p=.57
Length of relationship	3.4	1.5	3.8	1.1	t(56)=4.3 p=.28
Total of children	1.8	0.7	2.1	0.8	t(66)=.39 p=.06
Age of the first-born child	5.0	3.6	9.0	4.6	t(66)=3.7 p=.00
Parenting style (range 1-9):					
Warmth	6.7	1.3	5.7	1.6	t(65)=2.8 p=.01
Cooperation with the partner	6.4	1.9	5.9	1.8	t(61)=1.0 p=.34
Cooperation with pre-school/school	6.6	1.4	6.0	1.5	t(65)=1.8 p=.08
Strength	4.5	1.9	4.2	1.7	t(65)=0.7 p=.46
Independence	6.6	1.8	6.3	1.6	t(64)=0.6 p=.52
Temperament (range 1-5):					
Negative affect	3.8	1.5	4.4	1.5	t(65)=-1.7 p=.09
Openness/Extraversion	4.9	0.9	4.5	0.9	t(65)=1.5 p=.13
Control ability	5.2	0.9	5.4	0.8	t(65)=-1.0 p=.35
NEO-FFI stanine value (range 1-9):					
Extraversion	6.4	2.2	6.4	1.8	t(61)=1.4 p=.87
Conscientiousness	6.0	2.1	5.4	1.8	t(63)=1.5 p=.28
Neuroticism	3.8	2.5	3.7	2.1	t(64)=2.3 p=.74
Openness to Experience	5.5	1.9	6.5	2.3	t(63)=.32 p=.04
Agreeableness	7.0	2.1	6.8	2.0	t(63)=.01 p=.51
Education					
University	80.0%		93.9%		
College	8.6%		0.0%		
High School	8.6%		6.1%		
No education	2.8%		0.0%		
Caretime					
0-10 hours	0.0%		3.0%		
10-20 hours	5.7%		18.2%		
20-30 hours	14.3%		24.2%		
30-40 hours	17.1%		21.2%		
40-50 hours	17.1%		18.2%		
More than 50 hours	45.7%		15.2%		
Sex first-born child: male	65.7%		54.5%		

To be eligible for participation in the group of gay parents or in the group of heterosexual fathers, a man had to identify himself as a (gay) father and had to report having at least one child aged between 0 and 15 years. The participants all lived in Europe at the time of the data collection. The father's country of birth of the fathers deviated in part from the current place of residence. Participants could report being single or having a partner. If they

were in a relationship, they reported the duration of the partnership and the age of the partner. Both partners in the family were able to participate in the study. To be able to identify a pair, they were assigned identifiable IDs at the beginning of the survey. They also reported whether the first-born child lives at home, how the child was born and the amount of time per week they spent with their child. From the original sample ($N = 111$), we used the following criteria to exclude data for those fathers who were not eligible for the current study: Fathers who reported having a child older than 15 years old, fathers who did not fully complete the questionnaires, and fathers who identified themselves as partners of the first respondent. Only the gay fathers who contacted the project leader and the heterosexual fathers were evaluated. Mothers of children and partners of gay fathers were not included in this study. The final sample consisted of 35 gay fathers, of who were all in a relationship, and 33 heterosexual fathers.

3. Materials

Demographic information

The participants provided demographic information about themselves including age, place of birth, education, relationship status, length of relationship, employment, and their partners (including their age), if they were in a relationship at the time of the study. The participants also provided demographic information about the age, gender, and the birth of their first-born child.

Parenting styles of fathers

Parenting style was measured using the “Eltern-Erziehungsstil-Inventar” (EEI), a German parenting-style-inventory (Satow, 2013). The EEI is a 54-item, self-report inventory

for parents, designed to measure multiple dimensions of parenting such as warmth, strength, independence, religiousness, parental cooperation between parents, and parental cooperation with the pre-school/school. Items are scored on a 1 to 4-point Likert scale: 1 = strongly disagree and 4 = strongly agree. An overall score is calculated, with higher scores generally reflecting more positive parenting. All the subscales have high internal consistency (Cronbach's alpha = .71, .78, .81, .87, .88, and .93). Four overall scores can be calculated: (a) warmth, (b) strength, (c) independence, and (d) religiousness, as well as two additional scores: (e) working together with the partner and (f) working together with the pre-school/school. All the factors displayed more than 41% of variance in the items and all the factor loadings were above .51.

Temperament

The temperament of the child was assessed with either the short version of the Infant Behavior Questionnaire Revised (German version: Kristen et al., n.d.) (IBQ-R, for the age of 3-12 months, Gartstein & Rothbart, 2003; Putnam, Helbig, Gartstein, Rothbart, & Leerkes, 2014), the Early Childhood Questionnaire (German version: Kirchhoff, n.d.) (ECQ, for the age of 1-3 years, Putnam, Gartstein, & Rothbart, 2006), the Child Behavior Questionnaire (German version: Nikolaizig, n.d.) (CBQ, for the age of 3-7 years, Putnam et al., 2006), the Temperament in Middle Childhood Questionnaire (TMCQ, for the age of 7-10 years, Muris & Meesters, 2009) or the Early Adolescent Temperament Questionnaire Revised (EATQ-R, for the age of 11-15 years, Capaldi & Rothbart, 1992).

The IBQ-R is a 56-item self-report survey for parents, designed to measure multiple dimensions of temperament such as activity level, approach, cuddliness, distress to limitations, duration of orienting, falling reactivity, fear, high intensity pleasure, low intensity pleasure, vocal reactivity, perceptual sensitivity, sadness, smiling and laughter, soothability and vocal reactivity. The measure uses a 1 to 7-point Likert scale, such that 0 = never and 7 =

always. Three factors are formed: negative affect, openness/extraversion and reaction ability.

All the subscales have high internal consistency (Cronbach's alpha

= .77, .86, .84, .81, .83, .85, .90, .85, .85, .84, .85, .83, .80 and .84) (Putnam et al., 2014).

The ECQ is a 36-item self-report survey for parents, designed to measure multiple dimensions of temperament such as activity level, attentional focusing/shifting, cuddliness, discomfort, fear, frustration, high intensity pleasure, impulsivity, inhibitory control, low intensity pleasure, motor activation, perceptual sensitivity, positive anticipation, sadness, shyness, sociability and soothability. The measure uses a 1 to 7-point Likert scale, such that 0 = never and 7 = always. Three factors are formed: negative affect, openness/extraversion and reaction ability. All the subscales have high internal consistency (Cronbach's alpha = .72, .85, .72, .90, .79, .77, .79, .82, .67, .88, .77, .76, .84, .85, .81, .87, .80, .70 and .72) (Putnam et al., 2006).

The CBQ is a 36-item self-report survey for parents, designed to measure multiple dimensions of temperament such as activity level, anger/frustration, approach, attentional focusing, discomfort, soothability, fear, high intensity pleasure, impulsivity, inhibitory control, low intensity pleasure, perceptual sensitivity, sadness, shyness and smiling and laughter. The measure uses a 1 to 7-point Likert scale, such that 0 = never and 7 = always. Three factors are formed: negative affect, openness/extraversion and reaction ability. All the subscales had high internal consistency (Cronbach's alpha = .79, .71, .70, .72, .72, .69, .75, .77, .79, .66, .73, .62, .88, and .77) (Putnam et al., 2006).

The TMCQ is a 157-item self-report survey for parents, designed to measure multiple dimensions of temperament such as activity, affiliation, anger/frustration, attention focus, discomfort, fantasy/openness, fear, high intensity pleasure, impulsivity, inhibitory control, low intensity pleasure, perceptual sensitivity, sadness and shyness. The measure uses a 1 to 5-point Likert scale, such that 0 = never and 5 = always. Three factors are formed: negative affect, openness/extraversion and reaction ability. All the subscales have high internal

consistency (Cronbach's alpha = .50, .57, .78, .76, .77, .78, .78, .61, .53, .56, .77, .80, .81, and .51) (Muris & Meesters, 2009).

The EATQ-R is a 65-item self-report survey for parents, designed to measure multiple dimensions of temperament such as high-intensity pleasure, fear, irritability, autonomic reactivity, attention, shyness, sadness, motor activation, low-intensity pleasure, sensitivity and activity level. The measure uses a 1 to 5-point Likert scale, such that 1 = almost always untrue and 5 = almost always true. Three factors are formed: negative affect, openness/extraversion and reaction ability. All the subscales had high internal consistency (Cronbach's alpha = .74, .74, .69, .78, .76, .67, .74, .76, .79, .65, and .78) (Capaldi & Rothbart, 1992).

Father's personality

The father's personality was measured with the NEO-FFI-3 (Costa, McCrae, & Kay, 1995). The NEO-FFI-3 is a 60-item self-report survey used to assess neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. The items are scored on a 1 to 5-point Likert scale: 1 = strongly disagree and 5 = strongly agree. An overall score is produced for each factor, after which the values are converted into a stanine value. A higher stanine value reflects a stronger expression. All the subscales have high internal consistency (Cronbach's alpha = .87, .81, .75, .72, and .84) (Costa et al., 1995).

4. Procedure

Advertisements describing the "Parenting Style of Gay Dads Study" and eligibility criteria were sent by e-mails, placed on websites, and published in newspapers and newsletters of relevant organizations, such as support organizations for gay fathers. To express interest in participation, prospective participants were asked to contact the researcher via e-mail. All procedures were approved by the local Ethics Commission and performed in

accordance with the ethical standards of the 1964 Declaration of Helsinki declaration and its later amendments.

After a father expressed interest in the study, the researcher contacted him via e-mail and provided another description of the study, a personalized link and password that allowed him to access the online survey. Each link included a code that identified an individual participant or his partner as a couple. When a participant visited the study's Web site, he was asked to read a consent form and indicate his agreement with its conditions before taking the survey. Participation was completely voluntary and no financial incentives were offered. On average, the survey took about 30 minutes to complete.

5. Results

We start by reporting descriptive results. The first analysis describes the differences in parenting styles between the two groups of fathers. In the second analysis, we evaluate the influence of the sex of the first-born child on the parenting style of the fathers. The third analysis examines the relation between temperament and the parenting style of the two groups of fathers. Finally, using multiple regressions, we explore the best predictors of differences in the parenting style.

Because research on gay fathers has been criticized for the underreporting of differences between gay and heterosexual fathers (Biblarz & Stacey, 2010), nonsignificant results are presented in addition to statistically significant effects.

Gay Fathers

The average age for the group of the gay fathers was 42.3 years ($SD = 5.4$), and the average age difference between the two partners was 4.9 years ($SD = 3.6$). A substantial number of the fathers held a university degree (80.0%) and had a high socioeconomic status

($M = 66.7$, ISEI (Scale 16-88)). Socioeconomic status was measured with the International Standard Classification of Occupations (ISEI; Ganzeboom, De Graaf, & Treiman, 1992).

At the time of data collection (January 2018 to January 2019), 45.7% of the sample reported spending more than 50 hours per week for caring for their first-born child, $M = 35.7$, ($SD = 1.4$, range = 10 h to more than 50 h). Many fathers indicated that they were the first-born child's biological father (60%), some reported being the adoptive father (4%), some reported the child comes from an earlier heterosexual relationship (8%), some reported the child was born in a family with lesbian mothers (10%) and the remaining fathers reported that the child was a permanent foster child (18%). The mean number of children per family was $M = 1.8$ ($SD = 0.7$, range = 1-4).

Heterosexual fathers

The average age for the group of the heterosexual fathers was 43.9 years ($SD = 6.8$), and the average age difference between the two partners was 4.9 years ($SD = 5.6$). A substantial number of the fathers held a university degree (93.9%) and had a high socioeconomic status ($M = 67.0$).

All fathers in this group indicated that they were the first-born child's biological father. The mean number of children per family was $M = 2.1$ ($SD = 0.8$, range = 1-4). 15.2% of the sample reported spending more than 50 hours per week caring for their first-born child, $M = 31.6$, ($SD = 1.5$, range = 10 h to more than 50 h).

Parenting style and sexual orientation

The parenting style was determined on the basis of seven factors (warmth, strength, independence, religiousness, parenting cooperation with the partner, and parenting cooperation with the pre-school/school). We found significant differences in the warmth

factor for the group of gay fathers. Gay fathers reported higher levels of warmth ($N = 35$, $M = 6.74$, $SD = 1.34$); $t(65) = 2.8$, $p = .006$, compared to heterosexual fathers ($N = 32$, $M = 5.72$, $SD = 1.61$). They also differ in the factor parental cooperation with the partner, such as the gay fathers, ($N = 31$, $M = 6.39$, $SD = 1.94$); $t(61) = 0.9$, $p = .344$, and the heterosexual fathers, $N = 32$, $M = 5.94$, $SD = 1.79$. No significant differences were found in the other factors (all $ps > .05$).

To rule out the potential bias that the children of one group happened to be more difficult characteristics of temperament, we examined the temperamental assessments of the children and the personality of the father. We found no differences in the assessment of the temperament of the both groups, (gay) $N = 35$, $M = 3.8$, $SD = 1.45$ and (heterosexual) $N = 32$, $M = 4.4$, $SD = 1.52$, $t(65) = -1.7$, $p = .09$. We also assessed the personality of the fathers. Gay and heterosexual fathers only differed in their openness to experience, with gay fathers reporting slightly higher scores of openness to experience ($N = 32$, $M = 52.53$, $SD = 9.62$), compared to heterosexual fathers ($N = 33$, $M = 58.00$, $SD = 11.66$), $t(65) = -2.1$, $p = .044$.

Sex of the first-born child and the fathers' parenting style

In a next step, we examined the relation between the sex of the first-born child and the fathers' parenting style. Using an ANOVA with the factors sex of the first-born child and the subscale warmth, we found no difference in the parenting styles of fathers towards their first-born sons and daughters, $F_{1,65} = 1.4$, $p = .234$; adjusted $R^2 = .022$. In none of the parenting style subscales was there difference between boys and girls. In the factor "cooperation with the partner", there was no significant difference between boys and girls, $F_{1,61} = 0.94$, $p = .336$; adjusted $R^2 = -.001$.

Temperament of child and parenting styles

In a third step, we conducted series of correlations to determine which variables were associated with the different dimensions of parenting style, temperament and personality of the father (see Table 2). Age difference between partners, sex of the first-born child, and birth of the first-born child were all not significantly associated with the parenting style. Consistent with our expectations, there was a significant association between sexual orientation and warmth ($r = .40, p < .01$; see Table 2). A higher score in the warmth factor was positively associated with sexual orientation. We also found differences in terms of the temperament and the sex of the first-born child ($r = .58, p < .001$). Higher values in some of the three factors of in temperament positively correlated with gender; boys showed a higher score in negative affect in temperament. Overall, the main result was that, compared to heterosexual fathers, gay fathers showed significant differences in warmth and cooperation with the partner, they differ in the amount of time they care for the child and they don't differ in their parenting style with respect to the sex of the first-born child.

Table 2

Correlations among parenting style

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Sexual orientation 1=gay; 2=hetero	.01	.23	.13	.00	.00	-.16	-.01	.23	-.05	.11	.44**	.21	-.19	.12	-.33**	-.12	-.22	-.09	-.08
2	SES (ISEI)		.13	.03	.06	.25	.21	-.25	.29*	-.02	.10	.06	-.05	.08	-.18	.40**	.23	.16	-.34**	.21
3	Number of children			.09	.01	.30*	.01	-.14	.05	-.12	.06	.21	.24	-.37**	.07	-.15	-.14	-.02	-.14	.15
4	Age first participant				.37**	-.05	-.03	.01	.09	.07	-.06	.26*	.16	-.04	.09	-.04	-.03	-.11	.10	.11
5	Age difference between partners					.02	-.09	-.03	.05	.09	-.02	-.01	-.21	.08	.07	.12	-.15	-.14	-.10	.06
6	NEO_stanine: extraversion						.13	-.36**	.17	.21	.09	.03	-.06	-.12	.25	.11	.17	.22	-.31*	.22
7	NEO_stanine: conscientiousness							-.36**	.09	.16	-.10	-.05	-.05	.13	-.03	.09	.23	.08	.21	.26*
8	NEO_stanine: neuroticism								.00	-.48**	-.06	-.07	.07	.01	-.13	-.32**	-.41**	-.14	.07	-.44**
9	NEO_stanine: openness									-.07	.11	.28*	.01	.03	-.07	-.04	.16	-.02	-.24	.17
10	NEO_stanine: agreeableness										-.10	.08	-.12	.03	.13	-.02	.38**	.12	-.21	.01
11	Sex first-born child											.15	-.09	.17	.05	.15	.12	.01	-.01	.04
12	Age first-born child												.58**	-.11	-.03	-.25*	-.10	-.11	.05	.04
13	Temperament: negative affect													-.23	-.29*	-.31*	-.24	-.20	.17	-.11
14	Temperament: openness/extraversion														-.18	.02	.07	-.04	.07	-.13
15	Temperament: control ability															.07	.14	.09	-.15	.08
16	E EI warmth: stanine																.35**	.35**	-.19	.44**
17	E EI cooperation with partner: stanine																	.33**	-.18	.23
18	E EI cooperation with pre- school/school: stanine																		-.03	.14
19	E EI strength: stanine																			.03
20	E EI independence: stanine																			

* p<.05; ** p<.01

Predictors of fathers' parenting style

Finally, to consider all of the individual findings together, we calculated hierarchical multiple regressions to identify the most important predictors of different aspects in the parenting style of fathers (see Table 3). Parenting style and cohesion were not associated with any of the variables, but we conducted separate analyses for each of the other subscales. The first step of each model included the temperament factor negative affect as an important construct and thus a significant value in the previous calculations of temperament, the second step included the sexual orientation and the third step included variables such as age, SES,

number of children, time spent caring for the child, sex of the first-born child and some of the personality factors of the father.

The first model predicted two factors of parenting style. In this model, the difference in warmth was significant, $F_{1,65} = 6.97, p = .010$; adjusted $R^2 = .083$. The second model included the sexual orientation and here, we also found significant differences for warmth, $F_{2,64} = 6.64, p = .002$; adjusted $R^2 = .146$. The third model included more variables, such as age, SES and time spent caring for the child and here we still found significant differences with regard to warmth, $F_{13,42} = 3.66, p = .001$; adjusted $R^2 = .386$.

Next, we examined the predictors for cooperation with the father's partner. The first model showed no significant differences, $F_{1,61} = 3.80, p = .056$; adjusted $R^2 = .043$. The second model included the sexual orientation and also showed no significant differences, $F_{2,60} = 1.98, p = .147$; adjusted $R^2 = .031$. The third model included more variables, such as age, SES and time spent caring for the child and here we found significant differences with regard to cooperation with the father's partner, $F_{13,38} = 2.58, p = .011$; adjusted $R^2 = .288$. Overall, differences between gay and heterosexual fathers were associated with more warmth and cooperation with the partner in the group of gay fathers compared to the heterosexual fathers.

Table 3

Stepwise multiple regression onto parenting style, temperament, sexual orientation and other variables

Variable	Warmth			Parenting cooperation		
	B	SE B	β	B	SE B	β
Step 1						
Negative affect	-.32	.12	-.31*	-.30	.16	-.24 ⁺
Adjusted R ²		.08			.04	
F _(1, 65)		7.0*			3.8 ⁺	
Step 2						
Negative affect	-.26	.12	-.25*	-.28	.16	-.23 ⁺
Sexual orientation	-.86	.36	-.28*	-.22	.48	-.06
Adjusted R ²		.15			.03	
ΔR^2		.07			-.01	
F _(2, 64)		6.6**			2.0	
Step 3						
Negative affect	-.22	.14	-.22	.13	.22	.10
Sexual orientation	-.54	.39	-.17	.36	.54	.10
Age first participant	.01	.03	.02	-.00	.04	-.01
SES (ISEI)	.05	.02	.36*	.03	.02	.18
Number of children	-.10	.26	-.05	-.31	.37	-.13
Care time	.35	.15	.33*	.56	.21	.42*
Sex first-born child	.05	.37	.01	.49	.52	.12
Age first-born child	.03	.05	.08	-.08	.08	-.18
Extraversion	-.06	.10	-.08	.18	.15	.18
Conscientiousness	-.14	.10	-.17	-.10	.14	-.01
Neuroticism	-.34	.09	-.50**	-.25	.12	-.31*
Openness to experience	-.09	.09	-.13	.05	.12	.06
Agreeableness	-.23	.10	-.31*	.23	.13	.26 ⁺
Adjusted R ²		.39			.29	
ΔR^2		.24			.30	
F _(13, 42)		3.7**			2.6*	

6. Discussion

In the current exploratory study, we assessed similarities and potential differences between gay and heterosexual fathers. The sexual orientation of a father was shown to have an influence on parenting style, a result that supports previous findings as reported for the US (Bozett, 1989). In line with our hypothesis, gay fathers reported higher scores than heterosexual fathers in the “warmth” and “cooperation with the partner” factors. Cooperation means that the two partners discuss their approach to parenting of their children and exchange ideas. These results were also apparent when gay fathers were asked about the division of housework (including parenting) or division of labour (Tornello et al., 2015). It may be that

gay fathers experience a closer relationship with their partner because they probably discuss the decision to become parents through surrogacy more often and for longer than heterosexual couples (Tornello & Patterson, 2015). Emotional warmth, on the other hand, is characterized by mutual trust and recognition. The subscale “warmth” correlates significantly with the subscale “independence”: parents who show great appreciation for their children also make an effort to raise their children to be independent and responsible (Satow, 2013).

With respect to the fathers’ personality, gay and heterosexual fathers differed in their openness to experience in the NEO-FFI (Costa et al., 1995). The heterosexual fathers assessed themselves as more open than the gay fathers. Other research found differences in the dimension of neuroticism but no differences in the dimension of openness (Kurdek, 2001). The present study does not reflect the reasons why the heterosexual fathers assessed themselves as more open in the current study. This aspect should be investigated in further research.

Furthermore, gay fathers who are first participants spent significantly more time with their children than heterosexual fathers did, although the children of both groups were about the same age. It is possible that fathers who spend more time with their children develop a closer attachment to the child (Huston & Aronson, 2005; Starrels, 1994). This might also explain why gay fathers report less irritation when the child’s temperament has negative aspects.

Some researchers have suggested that there are differences in parenting style depending on whether the child is a girl or a boy (Harris & Morgan, 1991). In contrast to these previous findings, no such differences were found in the present study. Both groups of fathers showed similar parenting styles to boys and girls, although boys did score higher for the “negative affect” factor, as shown in other research (Belsky et al., 1997).

We also found that all of the heterosexual fathers were born in Europe and probably also grew up in Europe, while a large proportion of the group of gay fathers (68.6%) stated

that they were often born and/or grew up outside Europe. Whether this fact has an influence on the fathers' attitudes towards their own children with regard to their parenting style will need to be examined in additional research. This study did not consider the question of cultural influence on the parenting style.

A number of limitations should be considered. The first limitation was the moderate sample size, which was likely a consequence of this hard-to-reach population. The second limitation was the homogeneity of the participant groups, who were generally well-educated and reported a similar income levels, which may thus have led to such homogeneous results. However, the homogeneity might similarly be considered a strength of this study because as a consequence, the results are unlikely to be biased by large differences within the groups of participants. This may have been due to the recruitment platforms, which were perhaps not diverse enough. Thirdly, the use of volunteers may limit the general applicability of the results. Although it was not possible to obtain a representative sample of gay fathers, a variety of recruitment procedures were used to access as diverse a sample as possible. Future research should attempt to collect data from a more diverse sample. Using the internet to collect data enabled us to include participants from all over Europe. This methodology allowed for additional variation in terms of parent and child age, biological relatedness and relationship length. The participants filled out the questionnaires themselves, reflecting on the parenting of their children. This could have a socially desirable effect, as research says that gay fathers are more stigmatized than other fathers (Golombok et al., 2018). As noted, this study has an explorative character.

In summary, our results revealed that gay fathers and heterosexual fathers showed a large amount of similarities in their parenting as well as in their personality and the reported temperament of their children. Only two differences occurred: gay fathers showed higher scores in the "warmth" and "cooperation with the partner" factors.

This explorative study has provided information about modern family forms in Europe, more specifically about gay families. These family forms are becoming increasingly common, which is why it is important to better illuminate the way gay fathers are parenting. This will help to create a better understanding of the variability and consistency of parenting among different family forms.

Implications for further studies could include a comparison of gay fathers in Europe versus the US. An equally important question for future research is how the individual factors of parenting styles, such as the father's personality, influence the relationship with the child. Equally important is the issue of cultural influences (including the legal framework that applies in a country), which were not examined in this study. All of these issues need to be investigated further.

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B Study 2: Parental cooperation in gay families

A similar version of this study has been submitted to *Journal of Homosexuality*:
Neresheimer, Ch. D. & Daum, M. M. (submitted). Parental cooperation in gay families.
Journal of Homosexuality.

Abstract

Parental cooperation, that is, how parents work together on parenting their children, is seen as part of the general parenting style. In a European study, both fathers of 12 gay families, and the mothers and fathers of 20 heterosexual families answered questions with respect to their personality, the parenting style of their first-born child, and the parenting cooperation between them. The results concerning the nature of the parents' personalities showed high similarities between gay parents and heterosexual parents. Not only between the family forms but also within the individual family forms the parents differed. Mothers showed a higher value for the factor Conscientiousness than their partners. Two differences occurred: With respect to parents' personality, gay parents showed a higher level of Conscientiousness than heterosexual parents. With respect to parental cooperation, gay parents reported higher values in cooperation than heterosexual parents. Finally, parenting styles were very similar among both groups. Our results add to the limited empirical research about male same-sex parents and parenting style, personality of the parents and cooperation among parents.

Key words: parenting styles; parenting cooperation; gay families; parenthood

1. Introduction

Everyone who ever lived has had at least two parents and many people become parents in their lifetime. As a parent, you automatically think about how to raise your offspring (Bornstein, 2005). Parenting is the process of raising children and providing them with protection and care (Kretschmar-Hendricks, n.d.). Parenting is not unidimensional but is rather a highly multidimensional construct. Factors such as the personality, gender, marital relationship of the parents, among many others, have an influence on the parenting on the side of the parents. Likewise, the child itself has an influence on parenting given the individual differences in temperament and personality (Kuppens & Ceulemans, 2019). In Western industrialized countries, more and more children live in families where mother, father, or both parents openly identify themselves as lesbian or gay (Anderssen et al., 2002). However, while there is a substantial amount of research on lesbian mothers, research on gay fathers has received much less attention (Anderssen et al., 2002). When investigating parenting in these “modern family forms” (Tasker & Figueroa, 2016), important questions to answer are a) what influence has the personality of the parents on their parenting style? b) how is the quality of the (marital) relationship between gay parents compared to heterosexual parents? c) do homosexual and heterosexual parents differ in their parenting style and if so, how? d) how do the partners in these family forms cooperate? In the following, we will briefly describe the current knowledge with respect to these four aspects before we derive and formulate the concrete research question under investigation.

Personality of the parents and parenting style

Belsky (1984) asserted three principal socio-contextual determinants of parenting: first, the personality of the parents and other personal psychological resources, second, the child’s individual characteristics, and third, contextual stressors and supports. Previous

research has, for example, examined the mothers' personality characteristics as predictors of parenting style. When investigating parenting styles, the main focus of research is often on the relationship between mothers and their children or on that specific relationship and its interrelation with the sex of the child. Fathers are less often included in the assessment and analyses. For this reason, results from research of mothers' parenting style will be reported primarily in the following, followed by what is known about fathers and, in particular, gay fathers. When examining infants and their mothers longitudinally, maternal personality alone seems to predict future parenting behaviour (Clark et al., 2000). In particular, links between mothers' high levels of negative affectivity-neuroticism and parenting variables such as including low responsivity and sensitivity, and high power assertion have been reported (Kuppens & Ceulemans, 2019). Several thousand parent-child dyads were investigated in a meta-analysis that included in 30 studies. Higher levels of extraversion, agreeableness, conscientiousness, and openness and lower levels of neuroticism were related to more warmth and behavioural control, whereas higher levels of agreeableness and lower levels of neuroticism were related to more autonomy support (Prinz et al., 2009). Therefore and in general, the personality of the parents has a substantial influence on the parenting of their children (Belsky & Barends, 2002).

Quality of the relationship

Another important issue in parenting is the quality of the relationship between both parents. According to accepted models on the parenting style of parents (e.g. Darling, Steinberg, & Steinberg, 2017), the relationship is of high importance because it has an impact on the way children are brought up. For example, if a child's parents are in a permanent conflict, this inevitably has a different effect on their parenting behaviour compared to parents who live in relative harmony. There still seems to be a gap in the research of parental relation and parenting challenges. One possible reason for this lack of research is that the majority of

studies have focused on the child's wellbeing, assuming that the family structure and the level of parenting stress determine this (Khajehei, 2016). These studies, however, underestimate how parenting challenges can affect the parents' relationship, which in turn can affect child well-being (Brown et al., 2010). A second possible reason is that parents may not participate in the parenting programs and research, and therefore dismiss the significances of such research and parenting on the improvement of parent-child interaction and parents relationships (Axford, Lehtonen, Kaoukji, Tobin, & Berry, 2012; Brody, Dalen, Annett, Scherer, & Turner, 2012). The influence of the congruency of both parents' parenting styles, that is, whether they differ substantially or are more similar as well as the level of cooperation between the parents, is much less researched than the parent-child relationship or the personality of the parents (Khajehei, 2016).

Differences in parenting style

The gender of parents and their sexual orientation has been shown to have only a minor influence on children's psychological adjustment and social success (Biblarz & Stacey, 2010). For example, the level of parent-child attachment does not seem to be associated with parents' sexual orientation in families with adopted children (Erich et al., 2009). As Khajehei (2016) mentioned, "same-sex parents share the burden of child care equally and participate more often in family interactions, whereas heterosexual parents report specialization in parenting, indicating that mothers do more housework and child care than fathers do" (p. 2). Whether these findings are also visible in gay families in Europe is one of the questions that were addressed in the current study.

Previous research on this topic is scarce. In a meta-analysis, two studies suggested that gay male couples have a more equal and compatible parenting style than heterosexual couples, although somewhat less equal than lesbian couples (Mallon, 2004; Bigner, 1989). Other studies indicated that when a gay couple co-parent, they do so in ways that seem closer,

but not identical, to that of a lesbian couple than to a heterosexual couple (Bigner & Jacobsen, 1989). Further findings suggest that gay fathers are less likely to hit their children than heterosexual couples and even somewhat less than lesbian parents (Johnson & O'Connor, 2002). Without following stereotypical roles, it is possible to say that parenting styles by gay men resembles perhaps more closely the one by mothers than by heterosexual fathers (Biblarz & Stacey, 2010).

The parenting style of two gay fathers differs from the style of single heterosexual fathers. Gay fathers tend to create a more stable environment for their children, are more responsive, explain things to their children more often, and set more boundaries than heterosexual parents, because, according to the authors, gay fathers sometimes approach parenting more consciously than their heterosexual counterparts (Bigner, 1989; Bigner & Jacobsen, 1989; Bozett, 1989). From these findings it can be assumed that homosexual fathers prove to be competent fathers whose children are more likely to benefit from a more authoritative upbringing than children in heterosexual partnerships. Special emphasis should again be placed on the fact that the sexual orientation of their parents is less important than whether parents succeed in finding a common path in life (Fthenakis & Minsal, n.d.).

Partners in gay and lesbian couples have been shown to differ in their relationships to each other than heterosexual partners. For example, they create their relationships with less reference to traditional roles played by each partner. They come to their relationships with a history of being socialized into the same gender role and may more easily operate on the basis of an ethic of equality (Blumstein & Schwartz, 1983). As a result they often experience higher relationship quality than heterosexual couples (Kurdek, 2001).

Cooperation among partners

Cooperation or coparenting seems to be an intuitively understood, but not always well-defined, construct in parental research. Generally, the term describes the supportive alliance

between adults raising one or more children. Already in the 90s, McHale (1997) suggested that it is valuable to conceptualize cooperative or coparenting dynamics as forces within families that may be at least partially distinct from marital and parent-child relationships. Research showed that three relevant factors for cooperation are first, the way parents communicate with each other, second, how they discuss parental issues with each other, and third the direct communication with their children about the other parent (Boyum & Parke, 1995).

Research question

To sum up, parenting is a multidimensional construct that involves factors such as the personality of the parents and the relationship between the parents. Parenting styles differ between parents, for example between mothers and fathers, but potentially, and given the findings mentioned above, also between homosexual and heterosexual parents. Based on this, though sparse, evidence, the aim of the current exploratory study was to assess similarities and potential differences between gay and heterosexual families with respect to 1) the personality of the parents, 2) the level of parenting cooperation, and 3) the parenting styles. In relation to the previous literature, we formulated the following three hypotheses:

- 1 Previous literature has shown that the personality of the parents has a significant influence on how their parenting (Clark et al., 2000). Accordingly, we expected that the parenting style correlates with the personality of the parents.
- 2 Research has shown that the way in which gay parents divide up their cooperation on child parenting may differ from the way heterosexual couples divide up their parenting work (Khajehei, 2016). We therefore assume that cooperation is related to sexual orientation.
- 3 The level of parental cooperation among same-sex families is associated with similar levels in parenting styles (Neresheimer & Daum, n.d.).

2. Method

Participants

The sample consisted of both fathers of 12 gay families ($n = 24$ fathers) and a comparison group of 20 heterosexual families ($n = 20$ mothers, and $n = 20$ fathers). Because the first group is a small and hard-to-reach population, it was necessary to rely on a volunteer sample. In the present study, an additional challenge for the recruitment was the requirement that both fathers of one family participated in the study. The gay families were recruited through gay social groups, websites, e-mail lists, and newsletters of relevant organizations in Europe. Often, a father in a couple contacted the researcher and convinced his partner after making contact to join in. Somewhat arbitrarily, these fathers henceforth referred to as “first participants” or “father 1”.

For the recruitment of the group of heterosexual partners, social media, newsletters or e-mail lists of relevant organizations were contacted and care was taken to ensure that they could be matched with gay parents in terms of socio-economic status (SES), age of the children, duration of the partnership, and the age of the partner.

To be eligible for participation in the group of gay parents or in the group of heterosexual parents, participants had to report having at least one child aged between 0 and 15 years. The participants all lived in Europe at the time of data collection. The country of birth of the parents deviated in part from the current place of residence. Participants could report being single or having a partner. If they were in a relationship, they reported the duration of the partnership and the age of their partner. Both partners of the family could participate in the study. To be able to identify a pair, they received identifiable IDs at the beginning of the survey. They also reported whether the first-born child lived at home, how the child was born (e.g. via surrogacy) and the amount of time per week they spent with their child. From the original sample ($N = 111$; of which 51 gay parents and 60 heterosexual

parents), we used the following criteria to exclude data for those participants who were not eligible for the current study: Participants who did not fully complete the questionnaires in any particular question, especially the personality questionnaire. The final sample consisted of 24 gay parents and 40 heterosexual parents. Sociodemographic information for each group is presented in Table 1. More detailed information is discussed for each group below.

Gay families

The average age for the group of gay families was 40.0 years ($SD = 4.3$) for father 1, and the average age was 41.7 years ($SD = 6.6$) for father 2. The age difference between the two partners was 4.8 years ($SD = 2.4$). A large number of the gay fathers had a university degree (91.7%) and a high socioeconomic status (father one $M = 70.8$ and father two $M = 71.8$). Socioeconomic status was measured with the International Standard Classification of Occupations (ISEI; Ganzeboom, De Graaf, & Treiman, 1992, with a scale from 16 to 88).

At the time of data collection (January 2018 to January 2019), 41.7% of the fathers in gay families reported spending more than 50 hours per week for caring for their first-born child (category 1: 0-10 h, category 2: 10-20 h, category 3: 20-30 h, category 4: 30-40 h, category 5: 40-50 h, and category 6: more than 50 h), $M = 3.8$, ($SD = 1.25$, range = 40 h). A little less than two thirds of the fathers indicated that they were the first-born child's biological father (60%), some reported being the adoptive father (4%), some reported the child coming from an earlier heterosexual relationship (8%), some reported the child being born in a family with lesbian mothers (10%), and the remaining fathers reported that the child was a permanent foster child (18%). The mean number of children was $M = 1.9$ ($SD = 0.5$, range = 1 - 4). The gay parents showed similar values in cooperation: for fathers 1 $M = 7.3$ ($SD = 1.3$, range = 1 - 9) and for fathers 2 $M = 7.5$ ($SD = 0.7$, range = 1 - 9). The values relating to personality factors were found less different in a gay couple than between heterosexual parents (see Table 1).

Heterosexual families

The average age for the group of heterosexual fathers ($n = 20$) was 42.2 years ($SD = 7.8$), and for the mothers ($n = 20$) 38.9 years ($SD = 4.6$), with an average age difference between the two partners of 4.7 years ($SD = 4.6$). A substantial number of the parents reported having a university degree: the fathers (90.0%), and the mothers (80.0%), and a high socioeconomic status ($M = 64.7$ for the fathers, $M = 68.1$ for the mothers).

All parents in this group indicated that they were the first-born child's biological parents. The mean number of children was $M = 2.0$ ($SD = 0.7$, range = 1-4). 10.0% of the fathers reported spending more than 50 hours per week caring for their first-born child, $M = 3.5$, ($SD = 1.23$, range = 40 h), while 40% of the mothers reported spending more than 50 hours per week caring for their first-born child. The heterosexual parents showed similar values in cooperation: for mothers $M = 6.3$ ($SD = 1.9$, range = 1- 9) and for fathers $M = 6.2$ ($SD = 1.5$, range = 1- 9). The values relating to personality factors were found more different in a heterosexual couple than between gay parents (see Table 1).

Table 1

Sociodemographic information and descriptive data by family type (N = 64)

Variable	Gay parents				Heterosexual parents				ANOVA
	Father 1 N=12		Father 2 N=12		Mother N=20		Father N=20		
	M	SD	M	SD	M	SD	M	SD	
Age	40.0	4.3	41.7	6.6	38.9	4.6	42.2	7.8	F(3, 59)=1.1 ^{ns}
SES (measured with ISEI)	70.8	9.6	71.8	11.0	68.1	10.4	64.7	15.8	F(3, 54)=1.0 ^{ns}
Parenting style stanine-value (Range 1-9):									
Parenting cooperation with the partner	7.3	1.3	7.5	0.7	6.3	1.9	6.2	1.5	F(3, 60)=1.9 ^{ns}
NEO-FFI Stanine-value (Range 1-9):									
Extraversion	6.8	1.9	5.8	2.4	6.7	1.5	6.4	1.6	F(3, 51)=0.6 ^{ns}
Conscientiousness	6.2	2.0	6.6	1.6	7.0	1.8	5.0	1.1	F(3, 51)=7.3 ^{***}
Neuroticism	3.4	2.8	4.4	2.1	4.8	1.6	3.8	2.1	F(3, 51)=0.8 ^{ns}
Openness to Experience	5.6	1.1	5.9	2.0	6.2	1.6	6.3	2.6	F(3, 51)=0.4 ^{ns}
Agreeableness	6.8	2.3	6.8	2.2	7.3	1.5	6.7	2.0	F(3, 51)=0.9 ^{ns}

Variables	Gay parents		Heterosexual parents		t-Test
	M	SD	M	SD	
Age difference between partners	4.8	2.4	4.7	4.6	t(29)=0.0 ^{ns}
Length of relationship	3.6	1.4	3.5	0.9	t(29)=0.1 ^{ns}
Number of children	1.9	0.5	2.0	0.7	t(30)=-0.1 ^{ns}
Age of first-born child	3.9	2.5	6.7	4.5	t(30)=-2.2*

Sex of first-born child (frequency):	Father 1	Father 2	Mother	Father	chi ² -Test
Boy	8		11		chi ² (1)=0.6 ^{ns}
Girl	4		9		
Education (frequency):					
University	11	11	16	18	
College		1	2		
High School	1		2	1	
Caretime per child (frequency):					
0-10 hours				1	
10-20 hours			1	1	
20-30 hours	1	5	3	5	
30-40 hours	2	1	2	6	
40-50 hours	3	2	6	5	
More than 50 hours	6	4	8	2	

Note. ns: p>.05; *: p<.05; ***: p<.001

3. Materials

Demographic information

In addition to the two questionnaires (on parenting styles and on parents' personality) completed online, the participants provided demographic information about themselves including age, place of birth, education, relationship status, relationship duration, employment, and their partners, if in a relationship at the time of the study. The participants also provided demographic information about the age, gender and birth of their first-born child.

Parenting styles of parents

Parenting style was measured using the "Eltern-Erziehungsstil-Inventar" (EEI), a German parenting-style inventory (Satow, 2013). The EEI is a 54-item self-report survey for parents, designed to measure multiple dimensions of parenting such as warmth (e.g., "I give my child a feeling of warmth and security"), strength (e.g., "It is important that children respect authority figures"), independence (e.g., "I try to help my child to become independent"), religiousness (e.g., "It is important that children are guided by a religious belief system"), parenting cooperation with the partner (e.g., "My partner and I apply the same yardstick in the upbringing of our child"), and parenting cooperation with the pre-school/school (e.g., "We regularly attend meetings with teachers and/or preschool teachers"). The items were scored on a 4-point Likert scale: 1 = strongly disagree and 4 = strongly agree. A total score was produced and in general, higher scores reflected more positive parenting. All the subscales had high internal consistency (Cronbach's $\alpha = .71, .78, .81, .87, .88$, and $.93$). Six scores were calculated: (a) warmth, (b) strength, (c) independence, and (d) religiousness, with two additional scores calculated: (e) working together with the partner and

(f) working together with the pre-school/school. All the factors explained over 41% of variance in the items and all the factor loadings were above .51.

Parents' personality

The parents' personality was measured with the NEO-FFI-3 (Costa et al., 1995). The NEO-FFI-3 is a 60-item self-report survey used to assess neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Bornstein refers to neuroticism, as negative affectivity or emotional instability, which manifests itself as a tendency to psychological suffering, excessive longings or drives, unrealistic ideas, inappropriate coping reactions, and a disturbing, insecure, and vulnerable life orientation. Extraversion can be seen in the quantity and intensity of interpersonal interactions, the activity level, the need for stimulation and the ability to enjoy, control, and assert oneself. Openness to experience, very close to the construct intellect, reflects the tendency to have a broad perspective on life to approach challenges in an intelligent, creative, philosophical, and inquisitive way. Agreeableness or trustworthiness is reflected in an interpersonal orientation of feelings, thoughts, and actions along a continuum from compassion to antagonism. The high goal is to be perceived as cooperative, trusting, and warmly characterized. Conscientiousness is demonstrated by the extent to which a person is well organized, responsible, determined, reliable, hardworking, and even ambitious (Bornstein, 2005).

The items were scored on a 5-point Likert scale: 1 = strongly disagree and 5 = strongly agree. A total score was produced for each factor, after which the values were converted into a Stanine value. A higher Stanine value reflects a stronger expression. All the subscales had high internal consistency (Cronbach's alpha = .87, .81, .75, .72, and .84) (Costa et al., 1995).

4. Procedure

Advertisements for a “Parenting Style Study” were sent by e-mail, placed on websites, and published in newspapers and newsletters of relevant organizations for parents. The ads described the study and its eligibility criteria and gave the researcher’s e-mail address. To express interest in participation, prospective participants were asked to contact the researcher by e-mail. Snowballing procedures were also used to make contact with other gay parents. All procedures were approved by the local Ethics Commission and performed in accordance with the ethical standards of the 1964 Helsinki declaration and its later amendments.

After a parent expressed interest in the study, the researcher contacted him or her by e-mail and provided further information of the study, as well as a link and password that allowed him or her to access the online survey. Each link included a code that identified an individual participant or his or her partner as a couple. When a participant visited the study’s website, he was asked to read a consent form and indicate his agreement with its conditions before taking the survey. Participation was completely voluntary, and no financial incentives were offered. On average, the survey took about 30 minutes to complete.

5. Results

We report the results along the three hypotheses formulated in the Introduction. The first analysis describes the differences of personality and parenting styles between the two groups of parents. In the second analysis, we evaluate the parenting cooperation among the partners and their sexual orientation. The third analysis examines the relation between cooperation and parenting styles. Because research on gay families has been criticized for the underreporting of differences between gay and heterosexual families (Biblarz & Stacey, 2010), nonsignificant results are presented in addition to statistically significant effects.

Personality and Parenting Style

The personality of the parents was determined on the basis of the five factors, Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness (Costa et al., 1995). By means of different T-tests we examined the individual factors between the two groups. We found some differences between the factors of personality and parenting style between the two groups. Both groups reported similar values for Extraversion (father 1: $N = 12$, $M = 6.8$, $SD = 1.9$ and father 2: $N = 12$, $M = 5.8$, $SD = 2.4$); $F_{3,51} = .06$, compared to heterosexual parents (mothers: $N = 20$, $M = 6.7$, $SD = 1.5$ and fathers: $N = 20$, $M = 6.4$, $SD = 1.6$). The two groups differed in the factor Conscientiousness: with the gay parents scoring higher values, (father 1: $N = 12$, $M = 6.2$, $SD = 2.0$ and father 2: $N = 12$, $M = 6.6$, $SD = 1.6$); $F_{3,51} = 7.3$, compared to heterosexual parents (mothers: $N = 20$, $M = 7.0$, $SD = 1.8$ and fathers: $N = 20$, $M = 5.0$, $SD = 1.1$). The groups did not differ with respect to Neuroticism (gay parents: father 1: $N = 12$, $M = 3.4$, $SD = 2.8$ and father 2: $N = 12$, $M = 4.4$, $SD = 2.$; heterosexual parents: mothers: $N = 20$, $M = 4.8$, $SD = 1.6$ and fathers: $N = 20$, $M = 3.8$, $SD = 2.1$); $F_{3,51} = .08$. Neither did the groups differ with respect to Openness to Experience (gay parents: father 1: $N = 12$, $M = 5.6$, $SD = 1.1$ and father 2: $N = 12$, $M = 5.9$, $SD = 2.0$; heterosexual parents: others: $N = 20$, $M = 6.2$, $SD = 1.6$ and fathers: $N = 20$, $M = 6.3$, $SD = 2.6$), $F_{3,51} = .04$. Finally, no group differences were found for Agreeableness (gay parents: father 1: $N = 12$, $M = 6.8$, $SD = 2.3$ and father 2: $N = 12$, $M = 6.8$, $SD = 2.2$; heterosexual parents: mothers: $N = 20$, $M = 7.3$, $SD = 1.5$ and fathers: $N = 20$, $M = 6.7$, $SD = 2.0$), $F_{3,51} = 0.9$. Table 1 provides an overview of the results. In general, the personality of the two family types was very similar in many factors and showed small difference in parental conscientiousness.

Personality and parenting style within the family type

Not only between the family forms but also within the individual family forms the parents differed. The gay fathers showed a similar value in cooperation, were similar in all personality factors, except for the factor Neuroticism differences are visible.

The heterosexual mothers and fathers differed significantly in the personality factors Conscientiousness, Neuroticism, and Agreeableness (see Table 1).

Parenting cooperation

The group of gay fathers showed similar values in the cooperation: for fathers 1: $M = 7.3$ ($SD = 1.3$, range = 1- 9) and father 2: $M = 7.5$ ($SD = 0.7$, range = 1- 9), see Table 1. In a second step, we calculated the factor cooperation between the family types in a four-field table. We used the values of the factor Cooperation, which was collected in the EEI using seven items. Significant differences were found between gay and heterosexual families with respect to the cooperation among the two partners. The results indicate (although only slightly) higher scores in cooperation in the gay than heterosexual parents, $\chi^2(1, N = 64) = 4.1$, $p = .043$ (see Table 2).

Table 2

Chi-Square value for comparisons of cooperation between family types

Cooperation	Gay parents N=12	Hetero parents N=20	Chi ² -Test
high	8	6	Chi ² (1)=4.1*
low	4	14	

Note. *: $p < .05$.

Parenting cooperation and sexual orientation of the parents

To address the third hypothesis, we calculated hierarchical multiple regressions to identify the most important predictors of different aspects in the parenting style, the

cooperation among the partners, the personality of the parents and their sexual orientation (see Table 3). The first step included the parents' sexual orientation, the second step included the personality factors of the parents, and the third step included the parenting style factors.

The first model predicted the factors of cooperation and sexual orientation. The correlation between cooperation and sexual orientation was significant, $F_{1,62} = 10.9, p < .01$; adjusted $R^2 = .14$. Gay fathers thus show a higher value in cooperation. The second model included the five factors of personality and here, we also found significant correlations for the sexual orientation and for the personality factor Neuroticism, $F_{6,54} = 4.0, p < .01$; adjusted $R^2 = .25$. Gay fathers showed a higher value in Neuroticism. In the previous ANOVA, however, mothers showed the highest value in Neuroticism. The third model included the factors of the parenting style and here we also found significant differences concerning warmth, $F_{10,54} = 4.6, p < .001$; adjusted $R^2 = .40$. Overall, differences between gay and heterosexual parents were associated with higher values in the two parenting styles of warmth and independence compared to the heterosexual parents.

Table 3

Multiple regression on cooperation with parenting style on aggregated pair data

Variable	Step 1			Step 2			Step 3		
	B	SE B	β	B	SE B	β	B	SE B	β
Sexual orientation	-1.13	.34	-.39**	-.91	.31	-.35**	-.62	.30	-.24*
NEO FFI									
- Extraversion				.01	.09	.01 ^{ns}	.07	.09	.10 ^{ns}
- Conscientiousness				.12	.09	.15 ^{ns}	.04	.09	.06 ^{ns}
- Neuroticism				-.16	.07	-.26*	-.03	.08	-.05 ^{ns}
- Openness to Experience				.10	.08	.16 ^{ns}	.02	.08	.02 ^{ns}
- Agreeableness				.10	.08	.15 ^{ns}	.11	.08	.16 ^{ns}
Parenting style (aggr.)									
- Warmth							.45	.18	.32*
- Religiousness							-.02	.23	-.02 ^{ns}
- Strength							-.03	.15	-.04 ^{ns}
- Independence							.25	.15	.27 ^{ns}
df	1; 62			6; 54			10; 54		
Adjusted R ²	.14			.25			.40		
ΔR^2				.11			.15		
F _(13,42) ; F _(6,48)	10.9**			4.0**			4.6***		

Note. ns: $p > .05$; *: $p < .05$; **: $p < .01$; ***: $p < .001$

6. Discussion

In the current exploratory study, we assessed similarities and potential differences between gay and heterosexual families with respect to the personality of the parents, the level of parenting cooperation, and the parenting styles. We examined different constructs that are known to influence parenting: the parents' personality, their sexual orientation, and their cooperation within a parent couple. The main results showed that the sexual orientation of parents had an influence on the respective parenting style. This result that replicates previous findings as reported for the US (Bozett, 1989) in a European sample.

We further assessed the parents' personality. As consistently reported in previous studies, higher levels of Extraversion, Agreeableness, Conscientiousness, and Openness and lower levels of Neuroticism (Costa et al., 1995) were related to more warmth and behavioural control, whereas higher levels of Agreeableness and lower levels of Neuroticism were related to more autonomy support (Prinz et al., 2009). In line with previous literature, we found that a higher level of Conscientiousness had an influence on the parenting style. Conscientiousness reflects the extent to which a person is well organized, responsible, decisive, dependable, hardworking, and even ambitious (Bornstein, 2005). Further, gay parents in this study showed overall higher levels in Conscientiousness, which might explain the effect of gay parents showing a slightly warmer parenting style as reported earlier (Neresheimer & Daum, n.d.). Gay parents may show a more reflective attitude towards the desire to have children, as the hurdles to having children are usually much higher than in heterosexual couples. Gay parents might thus be in a closer-knit relationship with their partner (Tornello & Patterson, 2015).

The analyses of parental cooperation showed a reliable difference between gay and heterosexual parents. These differences occurred with respect to family type, and showed that gay parents did report, that they cooperate more strongly concerning for example the division of labor (Block et al., 1981). In our study, this result was replicated, the mean level of

cooperation was reported lower in heterosexual than in gay parents. Further research has shown that cooperation among partners is dependent on a number of different other factors, such as SES, age of the parents, and other sociodemographic issues, such as income or number of siblings, to only name a few (McHale, 1997). We are aware of the problem that due to the fact that the data of this study were collected via self-report, they are susceptible to subjective biases. It might very well be the case that if the couples had been examined in everyday situations, in which cooperation was required, the results might look differently. But still, the data are in line with previous research showing that homosexual families tend to be more cooperative than heterosexual families in their division of labor between housework and parenting (Tornello & Patterson, 2015).

The parenting styles of the two groups differed significantly in the factor warmth, with gay parents indicating higher values here. Already in an earlier study, in which only gay and heterosexual fathers were compared with each other (without mothers), the gay fathers showed higher values in the factor warmth (Neresheimer & Daum, n.d.).

The present study does not come without limitations, in particular regarding the generalizability to the findings. First, when using snowball techniques or self-selection, the sample is subject to a potential selection bias (Anderssen et al., 2002). However, the main effects of the present study replicate previous findings from similar samples. This suggests that this bias did not change the results considerably (or both samples have been biased). Second, the sample size of the gay families was relatively small. This is a result of this population being hard to access and the requirement that both parents needed to fill out the questionnaire. There were also some clear differences between the two family forms. Gay fathers showed more homogeneous answers, while heterosexual mothers and fathers showed clearer differences. In email correspondence, for example, many gay fathers reported that they filled in the questionnaires together, while heterosexual parents increasingly did so separately. Third, the participant groups were relatively homogenous, parents were generally well-

educated and indicated a similar income. This is one reason why the results did not evince strong effects. The homogeneity of the participants groups may have been due to the recruitment platforms, which were perhaps not diverse enough. However, the homogeneity might be likewise considered as a strength of the paper because the results are unlikely biased by large differences in the identity of the samples. Fourth, the use of volunteers may limit the generalizability of the results. Although it was not possible to obtain a representative sample of gay parents, a variety of recruitment procedures was used to access as diverse a sample as possible. Future research should attempt to collect data from a more diverse sample. The use of Internet data collection allowed us to include participants from all over Europe. This methodology allowed for additional variation in parent and child age, biological relatedness and relationship length. The participants filled out the questionnaires themselves, reflecting on the parenting of their children. This could have a socially desirable effect, as research says that gay parents are more stigmatized than heterosexual parents (Golombok et al., 2018). To conclude, the present study compared gay and heterosexual parents with respect to their personality, parenting style, and their parenting. The results showed high similarities between gay parents and heterosexual parents with respect to personality and parenting styles. The only main difference showed that gay parents reported higher values in cooperation than heterosexual parents.

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